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1. Hoffman, J.L.: in Chlorpromazine and Mental Health, Philadelphia, Lea & Febiger, 1955.

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A PSYCHIATRIC EVALUATION OF LAWS OF HOMOSEXUALITY [1]

KARL M. BOWMAN, M. D.,[2] AND BERNICE ENGLE, M. A.[3]
SAN FRANCISCO, CALIF.

No state specifies homosexuality as a crime. Every state, however, prohibits a number of homosexual acts, usually under the name of sodomy or crime against nature. Bestiality, buggery, or the abominable crime are other terms, not all synonymous. Because many of these laws cover not only homosexual acts but also forbidden heterosexual ones and sexual contacts with animals, any discussion must include them all.

Of the body of sex laws, sodomy laws are the most confused and vague, and, except for forcible rape, have the highest penalties. In criminal law, only murder, kidnaping, and rape are more heavily penalized. Mutual consent between adults is no defense, nor the intended privacy of an act inadvertently discovered.

Definitions.—English common law, the basis for U. S. statutory law, restricted sodomy to sexual intercourse *per anum* between two individuals, one of whom must be male, or between a human being and a beast of the opposite sex. Present day law ordinarily includes the following terms:

Sodomy, in the widest use, is carnal copulation by human beings with each other against nature or with a beast. In the narrower sense, "sodomy is carnal copulation between two human beings *per anum,* or by a human being in any manner with a beast." Present sodomy laws may cover homosexual acts, certain acts between heterosexual partners, acts with animals, fowls, or corpses, and, in one or two states, mutual masturbation or incitement to masturbation. In the act *per anum,* the term mankind includes females.

Definitions of bestiality, buggery, etc., are not given in this brief summary paper.

Statement of Offense.—Because of its degrading nature, the offense need not be described "with the same particularity" required in other criminal charges. The indictment "need not allege the exact date of commission of the crime," though there is contrary authority.

Description of Participants.—It is necessary to state whether the participant is another human being or an animal, but the person's sex need not be stated except "to exclude the possibility of intercourse other than of a sodomitical nature."

Presumptions and Burden of Proof.—The defendant is entitled to presumption of innocence, and it is the state's burden to prove his guilt, as by penetration.

Weight and Sufficiency.—The deed must be proved "beyond a reasonable doubt," but essential elements "may be established by circumstantial evidence." A case of cunnilingus is cited that was sustained despite lack of direct evidence of penetration.

Brief Historical Review.—The history of sodomy is confused. Homosexual acts were tolerated to varying extents by Greek and Roman codes, and perhaps even by the very early Christians, but were punished in the late Roman empire.

Hebrew law under Leviticus first made sodomy a crime, a capital offense. According to Epstein, the Bible passage ("There shall be no whore of the daughters of Israel nor a Sodomite of the sons of Israel," Deut. 23:17) refers to religious prostitution and religious sodomy. The Hebrew legislator emphasized the crime of sodomy, "not as a sexual crime, but as a form of idolatry," in religious usage, and prohibited both religious prostitution and sodomy as heathen idolatrous customs.

Sodomy became the crime *"peccatum illud*

[1] Read in the Section on Legal Aspects of Psychiatry at the 111th annual meeting of The American Psychiatric Association, Atlantic City, N. J., May 9-13, 1955.

The original article, from which this short version has been made, appears in a special spring issue, Symposium on Psychiatry and the Law, of the *Temple Law Quarterly,* volume 29, March 1956.

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horrible, inter Christianos non nominandum," that abominable sin, not fit to be named among Christians. According to early English authorities, the guilty person was to be burnt or to be buried alive. This penalty, the same as for treason, was inflicted because sodomy was joined "with heresy and apostasy as a form of treason against God." By the time of Richard I it was practice to hang a man or drown a woman guilty of sodomy. In the ecclesiastic courts even the attempt at sodomy was a ground for divorce, and the act, however secret, was criminal.

Sodomy was a crime in American colonial law, and obtaining personal property from another by threat to accuse him of sodomy was held "sufficient force and violence to constitute robbery," according to Burdick.

Vagrancy laws now often include homosexual acts; they spring from early English laws that subdivided vagrants into 3 classes: idle, disorderly persons; rogues and vagabonds; and incorrigible rogues.

Penalties in Statutory Law.—A review of penalties for sodomy further emphasizes the extreme confusion regarding homosexual acts. Recent compilations show that at least 46 of the 48 states make sodomy a felony, and the other two (N.H., Vt.) have omnibus statutes to cover it. Some 3 states (Minn., N.Y., Wash.) specify the prohibited acts. The New York 1950 revision penalizes at felony level, as with rape, the use of force or relations with minors, but makes other acts misdemeanors.

Maximum penalties for sodomy vary from a life sentence to a fine. They range from a life term to 20 years in a dozen states, and in 20 others from 15 to 10 years. A few states provide only a minimum penalty, as low as a 100-dollar fine in Indiana.

Legislatures often change the penalties, broaden the statutes, or enact supplements. Observers have pointed out that in 1950-1952, when New York reduced from felony to misdemeanor the offense of a sexual act in private between consenting adult males, California increased the penalty from 10 to 20 years' imprisonment. Later, sodomy was brought under the indeterminate sentence, with a range of one year to life.

To these criminal statutes must be added the force of the special sex psychopath legislation, now in force in at least 20 states or jurisdictions, which provides an indefinite term of treatment, as if for mental illness, for sex offenders found to be sex psychopaths or convicted of certain sex offenses. In some states these laws may apply to persons accused or even only suspected of sex offenses, and, under the guise of civil, not criminal, procedures, may gravely infringe on civil rights and due process. An indeterminate sentence may mean confinement for life, with parole or release depending on medical opinion of cure or improvement—an opinion most difficult if not impossible to render in the case of homosexuals.

Theoretically, both the statutes and special sex legislation apply to both male and female homosexuals. Kinsey finds that the statutes in 5 states (Conn., Ga., Ky., S.C., Wis.) "apparently do not apply to female homosexuality," and in 4 others (Ark., Colo., Iowa, Nebr.) the legal status is not clearly defined. Other statutory law is so worded as to apply to either sex. Law enforcement against female acts is practically nil. In a search through the several hundred sodomy opinions reported in the United States (1696-1952), Kinsey could not find a single case "sustaining the conviction of a female for homosexual activity."

Legislators are asked, often at the insistence of law enforcement officials, to draw up laws designed as catchalls, to be used only against the extraordinary criminal. It is claimed that procedural law protects a person unjustly accused. The enactment of such laws and loose interpretations of them give the impression that the defendant is regarded as guilty to begin with, and an all-out effort must be made to convict the guilty, no matter how many innocent people may suffer.

Take, for example, a recent change in a California law regarding vagrancy. At common law, a vagrant originally was a wanderer from the place where he worked. Under PC 647, 5, every "idle, or lewd or dissolute person" is a vagrant. Under PC 647a, every person "who annoys or molests any child under age 18 is a vagrant" punishable on first conviction by a maximum penalty of $500 fine or 6 months in jail or both; and further [647a (2)], every person "who loiters about any school or public place at or near which

school children attend, or who loiters in or about public toilets in public parks, is a vagrant," punishable by the same maximum penalty as above. This seems an overbroad law and, according to one legal comment, lacks the element of *mens rea*, or specific intent, because not all loitering or peeping can be considered criminal.

Procedural Law.—Court opinions have greatly expanded the interpretation of statutory law, although a number of judges deny infringing upon legislative function: "It is not for the courts, even prompted by the best of motives, to usurp the legislative function by interpretation," declares a judge in regard to public hearings in a sodomy case.

A Georgia decision that denies any need for expansion of definitions for sodomy cites a Wisconsin opinion sustaining a conviction for fellatio: "There is sufficient authority . . . and if there were none, we would feel no hesitancy in placing an authority on the books."

A considerable number of opinions broaden the scope of the statute, for example, including the act of fellatio, often without exactly detailing the offense. Courts have ruled that neither the precise nature of the act nor the time of occurrence need be stated. Either proof of penetration is unnecessary or else the slightest penetration is enough to complete the act. Even when the circumstantial evidence concerns the character of the act or there is a dissenting opinion, the appellate court decision may omit exact details. An Indiana case (Burton v. State) thus justified the indefiniteness of both statute and opinion: The opinion "for the same reasons [as for the statute] refuses to defile the reports by a recital of the sordid, immoral, depraved, and detestable statements contained therein."

In the same case two dissenting justices explained that for clarity they must cite somewhat more of the evidence, and they did so. A dissenting justice called indefiniteness in the statutes and decisions a grave obstacle to just law enforcement, and stated:

> This calculated avoidance of indelicacy has resulted in quite some obscurity and uncertainty in dealing with a most heinous crime, the seriousness of which is attested by the fact that our Legislature has prescribed such a high penalty for its commission, and that in the early days of English law burying alive or burning to death was the punishment meted out.

A Georgia decision (Barton v. State) insists that abhorrence of a crime should not blind the court "to a correct application of the principles of law involved." Judge MacIntyre declared the brief phrasing of the indictment "was not intended to dispense with good pleading" or deny the accused "a sufficiently full and complete statement" of facts he must meet. Questions of law cannot lightly be brushed aside because of a distasteful subject. However distasteful and depraved its character, the case requires for adequate consideration a full discussion of details, without unnecessary indelicacy, "but also without prudery or idle denunciation of the crime." The court therefore reversed the lower court verdict because "the defendant is entitled to have the information as to which one of the ways the State contends that he committed the crime of sodomy."

Deviate Sex Practices in Federal Personnel.—The present emphasis on sexual conformity in the federal employee or inductee has centered on homosexuality. The person even suspected of homosexuality is banned from any government work. Both the armed forces and the civil service commission regard homosexual and other deviate practices as immoral conduct that unfits the inductee, appointee, or applicant for service.

Several congressional committees have strongly attacked the induction or employment of homosexuals or other sexual deviates. In 1950 a senate investigations subcommittee investigated such employment on a wide scale. It warned that these persons should not be hired because those "who indulge in such degraded activity are committing not only illegal and immoral acts, but they also constitute security risks in positions of public trust." This conclusion was based on a consensus of various intelligence agencies that because most homosexuals lack emotional stability and have weak moral fibre, they are an unnecessary risk in government service.

Procedures now include a screening process for all civil service applicants, and the appropriate department is notified of any police record involving homosexual or other sexual perversion. Since April 1950, job

holders may be sent to the Public Health Service for complete psychiatric and psychological examinations, on the basis of which the department head decides whether to request a resignation. In his discussion of executive order 10450, Hoover stated that all derogatory data on sexual perversion are supplied at once to the civil service commission, "without comment or recommendation."

It was recently announced by Dennis A. Flinn, director of the state department security office, that two state department employees were fired last year for Communist party affiliation. He also said "that 104 sexual perverts were dismissed, 83 in the foreign service and 21 in the department."

Similarly, in the armed forces an inductee risks an undesirable or blue discharge because of homosexual acts or even tendencies, and such discharge bars him from benefits or compensation or pension under regulations of the veterans administration.

A recent directive in one section of the armed forces concerned the discharge of homosexuals and any subsequent review of the case. These matters were described as "very unpleasant and often disgusting." Although homosexuals are security risks, moral risks, and "their presence reflects unfavorably" against the service, they must be disposed of justly. Two points must be decided in the individual case: Is the "homosexual" label justified, and *is* he a homosexual, whether or not he has committed a perverse act; and if so, what type of discharge is suitable? The latter point depends on the individual's behavior and known character.

These comprehensive procedures against employment or retention of civil service employees, and the orders in at least one branch of the armed services for separation of homosexuals or of those even suspected of homosexuality raise further very serious difficulties for such individuals. Almost no corporation or other private business will hire a man with such a stigma on his record. If the present wave of opposition continues, certain male and female homosexuals may find it practically impossible to earn a living. When one considers that homosexuality either cannot be cured or at best entails a long and extremely costly treatment for even minor modifications, the grave plight of these persons can be understood.

It is clear that many grave injustices will result. A person friendly to or even associating with a person dismissed for homosexuality is in turn subject to suspicion, and if doubt arises, he too may find himself without a job. This wave of hysteria has affected the courts. In his dissenting opinion, a judge in the District of Columbia declared that the charge of assault, on the basis of homosexual gestures, was made to evade the legal requirement of corroborated testimony in such a case, and in turn covered an invitation by the police officer for the defendant to commit an act of perversion; and that the prosecution justified such virtual entrapment by the argument, "There is good reason for the Government to prosecute these cases. All the security agencies in the United States immediately fire these people as weak security risks . . ."

Legal Aspects of Homosexuality Abroad.—A British law passed in 1861 makes the maximum penalty for sodomy (not coterminous with a homosexual act) life imprisonment for males. A law enacted in 1885 fixes a 2-year maximum term for any type of male homosexual acts. Corresponding acts between females are not legally banned.

Homosexual crimes in Britain are stated to be 4 or 5 times as common as before World War II. In 1949 an English joint medico-legal committee investigated the problem and advised early official consideration of the Code Napoleon attitudes prevailing on the continent—no penalties for voluntary private homosexual conduct between adults. Similar studies and recommendations were made in Scotland. No action was taken.

An outcry arose in the winter of 1953-1954 when persons convicted and sentenced to imprisonment for homosexual acts included a British lord and a famous actor. Although the popular British press clamored for more severe laws and ostracism of known homosexuals, better informed opinion spoke for easing present laws. It was proposed to equate homosexual with heterosexual crimes and penalties; and an age limit of 21 was suggested for homosexual seduction or violation of youth.

British resentment against police attempts to enforce laws against male homosexuality was also aired. According to one account, handsome young policemen at times pose as

decoys in certain Central London public toilets; and experienced criminal lawyers will never enter a public toilet in this area, "so great do they feel is the risk of a wholly innocent man being convicted." A decision in a minor court held, for example, that police evidence about a man only smiling once at another, repeated in respect to several men and looking "in the direction of" their persons, was enough to sustain a conviction of "persistently importuning" these men for immoral purposes; and that the case was so clear as to make the defendant's appeal "lamentable." One observer, who demanded greater scrutiny of such charges of "persistently importuning," asked, "Do adult male persons need the protection of the law when smiled upon in lavatories or elsewhere?" He added that such traps do not catch the type of man who seduces children, and thus do not concentrate on protection of the young and preservation of public decency.

Jowitt's recent review of his experience as attorney general and later as lord chancellor emphasizes that about 90% of all blackmail cases concern charges of homosexual conduct between adults; a class of adult men carry on a business as homosexuals and make their living off blackmail. Although recognizing the difficulty of change at a time of marked increase in sexual offenses, Jowitt recommends the legal limitation to sex offenses in which one participant is a young person, with a wide definition of the term, young person. He calls it foolish for the ambition of criminal law to be "coextensive with the ambition of the moral law."

An interim report prepared by a group of Anglican clergy and doctors has been privately circulated by a council of the Church of England. It recognizes that homosexual acts, although a sin in the eyes of the Church, are not necessarily crimes to be punished by the state. Fornication and adultery are grave sins, and may well have more serious consequences than do homosexual practices but they do not constitute crimes. The present law is unjust, and by giving the homosexual a just grievance, aids him to ignore the moral issuses of his act. Instead of protecting the young and preserving public decency, the law invites blackmail and may indirectly cause suicides. The interim report therefore urges an official investigation into all aspects of the problem.

Laws regarding homosexuality in Western Europe in general follow the Napoleonic code and restrict penalties for homosexual acts among adults to use of force or other coercive influence and to public indecency. Austria, Greece, Finland, and Switzerland have specific statutes against such homosexual acts between females, and a government commission advised this application in Sweden.

Conclusion

Our review of legal phraseology and terms serves to highlight the confusion, prudery, and rigid tradition that surround sodomy and related acts in substantive and procedural law.

First, the ubiquitous use of the term, "against nature, unnatural" is traced to an ecclesiastic hairsplitting definition as to what is sin and to what degree. Sodomy, the crime against nature, at one time subject only to ecclesiastic censures, came to be classed with treason, heresy, and such crimes. The harsh penalty is then cited by modern justices as proof of how heinous is the crime, its details too revolting to be mentioned. An Oregon opinion classed fellatio (involving adults) as just as unnatural as sodomy *per anum* because in nature the sex organs are concerned with reproduction, the alimentary canal with nutrition; thus it "is self-evident that use of either opening of the alimentary canal for the purpose of sexual copulation is against the natural design of the human body."

This prudery and hush-hush attitude on the part of the courts lead to serious defects. The defendant is entitled to know the exact nature of the acts of which he is accused, with their manner of performance and time of occurrence, as in other crimes. The defendant's desire to prove an alibi requires the prosecution to specify a definite time for the act; but this has not been done in some cases.

Attempts to compare the heinousness of sex crimes or to determine the exact degree of guilt are often influenced by emotion and may be open to question. Hebrew tribal law once ruled that the beast involved in an act of sodomy should also be stoned, though it had committed no crime.

More and more law enforcement agencies —police, district attorneys, narcotic bureaus —are demanding loosely written laws under which they can "throw the book at anyone they want to get." Admittedly, such laws *could* be used unfairly, but the authorities maintain that they will never do so; that such laws are needed to catch the real criminals.

Laws, as many are being written at present, are taking away the idea that a man is innocent until he is proven guilty. This zeal and effort to get cover-all laws under which to catch the extraordinary offender have resulted in enactments that make guilt by association. Behind this change in law is the idea that conviction of the guilty is all-important; that it is better to convict one innocent person than to let 100 guilty ones escape; whereas, it used to be a guiding principle that it is preferable to let 100 guilty escape rather than to wrongly convict a single innocent person.

Under national security and commissioned corps regulations, unproved gossip about a person's homosexuality may cause his dismissal from government employ or the armed services. This charge then appears on his record and may prevent his getting another job. Such regulations may cause any number of innocent men to be stigmatized as homosexuals, their careers lost, their lives ruined. They may well have been cast out by a group about whom the same gossip could be raised.

Those with much experience in criminal law have made various suggestions. Ploscowe finds that laws against sodomy, homosexual acts or crimes against nature are "practically unenforceable." According to one study, 6 million homosexual acts take place yearly for every 20 convictions. This means that mainly the indiscreet and unfortunate are caught and convicted.

Recommendations

The following recommendations embody the main suggestions as to legal reforms that have been made by various members of the legal profession as feasible and practicable, in the light of public opinion. We suggest their careful consideration by all students of the problem.

I. Changes in substantive law: reforms that have become good general practice may best be incorporated into law during a period of general revision of the penal code.

1. The American Law Institute is now working on a model penal code. In its consideration of sexual offenses, the Institute is said to have recommended practical revisions of the sodomy laws, so as to place sodomy and related sex offenses on a par with heterosexual relations that do not involve use of force or its equivalent, corruption of the young and public outrage. In the latter instances, the degree of seriousness is estimated.

Guttmacher and Weihofen have suggested that some of the large state universities begin a multidisciplined study of crime which would consider and define sex delinquency and crimes.

2. A national commission to study the whole problem of sex offenses should attack the problem of how to achieve greater statutory harmony. This commission could begin with the areas on which there is fairly common agreement and then, guided by the model code, formulate methods for discussing and settling these points by legislative committees, before the points are submitted to the separate legislatures.

The present study on the administration of criminal law, sponsored by the American Bar Association, may furnish some support to this idea.

II. Changes mainly in procedural law: here come the many partial changes, without revoking the statute. Some evidence indicates that public opinion will better support piecemeal revisions and changes than outright repeal.

1. It is clear that modification of laws on homosexuality cannot be divorced from laws on other types of sexual behavior. Public opinion will more readily support changes regarding heterosexual behavior and gradually such changes can then be extended to laws on homosexual acts.

For example, existing laws against fornication between adults may be repealed, and sodomy laws revised to exclude all voluntary sexual acts in private between a married couple. The concept expressed in the report to the Church of England that acts such as fornication and adultery are sins rather than crimes seems to be a wise one.

These changes strengthen the idea that consenting adults have the right to indulge in private in any type of nondangerous sex act. Eventually the public becomes ready to apply this idea to all acts—homosexual as well as heterosexual.

2. Procedural laws should presume that the accused is innocent until proved guilty. These procedures include: (a) A definite, precise account of the nature, manner, and time of act and its performance, between what partners; (b) greater emphasis on reliability of testimony and determination of circumstantial evidence beyond any reasonable doubt.

3. Strict enforcement of these laws, under such protections and safeguards.

4. Refusal to ask for or use catchall laws that are aimed only at the extraordinary culprit.

A general change in attitude is also needed. All law enforcement officials must learn to consider the alleged sexual act objectively, as a human phenomenon that should be adjudicated to the best interests of society and of the individuals concerned.

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PSYCHODYNAMIC PATTERNS IN THE HOMOSEXUAL SEX OFFENDER [1]

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The clinical material which forms the basis for the discussion and conclusions presented in this paper has been gathered during the past 3 years by the members of the Sex Delinquency Research Project of the New York State Department of Mental Hygiene. The cases were studied at Sing Sing Prison, and were all individuals convicted of sexual felonies. In this communication I shall limit my remarks to one group, namely the homosexual pedophiles. This group comprises 30 men involved with prepubertal boys. A group of 30 rapists and 50 nonsexual offenders, *e.g.*, burglars, forgers, etc., will be used for comparison purposes.

In 1948, the legislature of the State of New York appropriated funds for the study of persons convicted of sexual felonies, with regard to the etiology, prognosis and therapy of these antisocial acts. The first report on these cases was issued in March 1950(1) and was the basis for a change in the laws covering sexual offenses. Briefly, these changes are concerned with the introduction of an optional indeterminate sentence of one day to natural life for the sex felon, with the stipulation that the men so sentenced shall be considered for parole when the psychiatrist feels they are ready to make a more satisfactory adjustment in the community than previously. Many of the men in the present series have been sentenced under this provision of the law, and have been considered for various types of therapy. The present series of cases has been studied since 1952, on a more intensive scale than the original group, using data that came out of the initial research.

The current information has been gathered by a psychiatric team of psychiatrists, psychologists, and psychiatric social workers, all with 3 or more years of previous prison experience. This is an important qualification, since the techniques of interviewing and testing men in state prison differ in certain important respects from those used in the usual psychiatric clinic or hospital. Three separate psychiatric evaluations are made on each man, and the results combined. In addition, a battery of psychological tests, Wechsler-Bellevue, Rorschach, TAT, H-T-P, and Blackie, are given and rated by one psychologist, and then rated and discussed by 2 others, with the results again being combined. We thus have 6 separate evaluations of each individual, totaling approximately 50 hours of examination and appraisal per man. This information has been accumulated in a series of rating scales, dealing with the entire life history of the man, his personality patterns, antisocial activity, present offense, and evaluations of unconscious conflicts and motivations from the projective techniques.

From previous studies on these men, and from the author's clinical experience as supervising psychiatrist at Sing Sing, we were aware of the serious degree of psychopathology present. In our initial formulations, therefore, we gave prominent consideration to the existence of schizoid or schizophrenic adaptations in this group. Table 1 shows the diagnostic categories, and a comparison of diagnoses in the 3 groups under discussion.

We use the term character disorder to identify those men who show some or all of the following: schizoid personality, with varying degrees of inappropriate response;

TABLE 1

DIAGNOSES

	Rapist	Homosexual pedophile	Control
Normal	0%	0%	0%
Character disorder	43	21	42
Neurotic	0	0	2
Pseudoneurotic schizophrenia	7	26	2
Pseudopsychopathic schizophrenia	30	15	48
Overt schizophrenia	20	35	6
Other psychosis	0	3	0

[1] Read in the Section on Legal Aspects of Psychiatry at the 111th annual meeting of The American Psychiatric Association, Atlantic City, N. J., May 9-13, 1955.

[2] Director, New York State Sex Delinquency Research Project, New York State Department of Mental Hygiene, New York City.

difficulty in interpersonal relationships without frank withdrawal; impaired conscience or superego function; minimal guilt; vague referential ideas. The pseudoneurotic and pseudopsychopathic schizophrenic reactions have been described elsewhere(2, 3). Under overt schizophrenia we include all individuals showing abnormal psychological signs and symptoms of the schizophrenic type, such as overt delusions and hallucinations, autism, dereism, and intrapsychic ataxia, even though these may be minimal. The "other psychosis" was an involutional depression. The severity of the personality disturbance in these groups, as for example, the 79% schizophrenic illness in the pedophiles, has been confirmed by the psychological test findings, particularly the Rorschach and H-T-P, where the evidences of personality disintegration are quite apparent. Even though they present a generally orderly front, to the extent that none was diagnosed as being legally insane in the presentencing investigations, otherwise we would not see them in Sing Sing, careful appraisal of their day-to-day performance reveals a high percentage of pathological adaptations, as shown in Table 2, which gives the types of symptoms found.

In a previous communication(4) we presented some of the evidence indicating the marked fear of sexual contact with the adult female, and the accompanying genital diminution fears. This was based largely on the responses to psychological testing, and showed marked anxiety responses to stimuli that are normally considered in the sexual context. For example, in response to the TAT card 13MF (a seminude female lying in bed with a man in the foreground), in contrast to the usual sexual theme, 93% of these men offered stories of the female figure being either sick, dying or dead, thus rejecting the usual heterosexual theme, and at the same time exhibiting marked hostility toward the mature female sex object. Further evidence of this pattern in the overt behavior of these men is now available. For example, in evaluating their adult sexual performance, we find that 60% of the homosexual offenders have never married, even though they are all over 21 years old (Table 3).

The various reasons given for not marrying are shown in Table 4. These are consciously expressed reasons, and thus contain some degree of rationalization and distortion, yet the stated reasons still come very close to the basic premise given above.

Evaluation of the sexual self-image in childhood in these men further demonstrates their marked feelings of inadequacy as masculine individuals. This is demonstrated in Table 5, where 78% of the homosexual offenders show feminization, as compared with 26% of the rapists, and 20% of the controls. The inability of the homosexual offenders to produce a compensatory "tough guy" attitude is also shown in this table.

Evaluation of the various areas of sexual performance is also interesting. Table 6 shows the evaluation of heterosexual interest in these men, while Table 7 is a tabulation of

TABLE 2

SYMPTOMS

	Rapist	Homosexual pedophile	Control
Psychosomatic	37%	47%	42%
Psychomotor	30	40	14
Epilepsy	7	0	0
Hysteria	3	7	6
Obsessions	10	13	8
Compulsions	17	23	16
Phobias	33	57	20
Mood disturbance	27	50	32
Affect disturbance	77	90	64
Referential ideas	17	43	38
Paranoid ideas	30	50	36
Other delusions	17	7	10
Hallucinations	27	33	32

TABLE 3

MARRIAGE

	Rapist	Homosexual pedophile	Control
Never	53%	60%	24%
1	38	31	62
2	6	9	10
3+	3	0	4

TABLE 4

REASONS NO MARRIAGE

	Rapist	Homosexual pedophile	Control
Economic	25%	26%	16%
No suitable object	43	37	41
Sexual difficulties	6	53	8
Personality difficulties	60	68	50
Parental objection	12	10	0
Other	60	26	58

TABLE 5

SEXUAL SELF-IMAGE IN CHILDHOOD

	Rapist	Homosexual pedophile	Control
Overcompensated masculine	37%	12%	28%
Normal masculine	37	12	52
Some feminization	26	64	20
Marked feminization	0	12	0

the actual amount of heterosexual activity. Both of these evaluations show the marked impairment of functioning in the homosexual group, in contrast to the rapist and controls.

Further evidence of the marked anxiety that accompanies heterosexual activity in these men is shown in Tables 8 and 9. Table 8 gives an evaluation of post-intercourse anxiety, as demonstrated by the lack of pleasurable response, disgust, hostility, avoidance of the sexual partner, psychosomatic symptoms and overt anxiety. The main differences here are between the controls and the 2 groups of sex offenders. Table 9 is an estimate of the degree of sexual disturbance, as shown by premature, instantaneous, or delayed ejaculation, variant patterns of sexual behavior, and diminished or excessive sexual drive. Here there appears to be graded scale of increasing impairment of function from the controls through the rapists to the homosexual offenders.

All of the above information logically results in the estimates of the adult sexual self-image in these men, as shown in Table 10.

TABLE 6

HETEROSEXUAL INTEREST

	Rapist	Homosexual pedophile	Control
None to slight	0%	22%	4%
Below average	20	51	22
Average	64	18	60
Excessive	16	9	14

TABLE 7

AMOUNT OF HETEROSEXUAL ACTIVITY

	Rapist	Homosexual pedophile	Control
None	0%	23%	2%
Isolated	7	3	2
Infrequent	10	29	6
Frequent with significant lapses	10	16	12
Essentially continuous outlet	73	29	78

TABLE 8

POST-INTERCOURSE ANXIETY

	Rapist	Homosexual pedophile	Control
None	13%	8%	34%
Slight	27	21	26
Moderate	44	41	34
Severe	16	30	6

TABLE 9

HETEROSEXUAL FUNCTIONING

	Rapist	Homosexual pedophile	Control
Apparently normal	33%	3%	40%
Episodic mild disturbance	14	3	20
Chronic mild disturbance	40	20	30
Episodic severe disturbance	3	9	0
Chronic severe disturbance	10	65	10

It should be no surprise to find a much higher percentage of the controls with feelings of sexual adequacy, and again a downward gradation through the rapists, to the homosexuals.

All of these findings tend to support Rado's(5) formulation of the inhibiting effect, on sexual performance, of fear of intimate sexual contact with the adult female. The sources of this difficulty are commonly ascribed to the restrictive, punitive parental attitudes toward the child's early sexual interests and activities. In the present study, less than 10% of the men were given any kind of structured sexual information. (Only one was given adequate information.) Parental attitudes toward the child's sexual curiosity and behavior are shown in Table 11, emphasizing the evasive or threatening attitudes.

The differences in the reactions of the 3 groups to this repressive and threatening climate are shown in Table 12, where the impact on the homosexual offenders appears to be much greater than on the other 2 groups.

In seeking for an explanation of the differences in the capacities of men in the several

TABLE 10

SEXUAL SELF-IMAGE—ADULT

	Rapist	Homosexual pedophile	Control
Adequate	16%	0%	34%
Some inadequacy	60	24	50
Marked inadequacy	24	76	16

TABLE 11

PARENTAL ATTITUDES VS. CHILDHOOD SEXUAL INTEREST

	Rapist		Homosexual pedophile		Control	
	Father	Mother	Father	Mother	Father	Mother
Permissive	3%	0%	0%	0%	4%	4%
Evasive—denial .	85	90	78	82	84	78
Inconsistent	0	0	3	3	2	4
Threatening, punitive	6	23	12	18	14	16
Unknown	10	0	9	6	6	4

TABLE 12

EARLY FEARS RELATED TO SEX

	Rapist	Homosexual pedophile	Control
None (denied)	73%	41%	58%
Mild	13	24	30
Severe	10	35	12

groups to tolerate psychological stresses of various types, we have been impressed by the intensity and apparent chronicity of childhood anxiety. Table 13 gives an evaluation of anxiety, based on symptoms such as enuresis presisting into adolescence, nail biting, nightmares, marked fears, especially of the dark and of snakes, and marked shyness.

The effects of this intense childhood anxiety on the adult patterns of adaptation can be stated only tentatively at present. One aspect of the general psychodynamic pattern, that may be related directly to the severe childhood anxiety, is a pervasively concrete orientation toward the environment. Cruvant (6) gives the same picture of primitive and concrete orientation:

> These people are conspicuously non-verbal in their integrations and on psychological tests . . . are superficial . . . show little capacity for introspective thinking [p. 192].

Again, the clinical evaluations parallel the psychological findings of a reduced capacity for fantasy release, or other sublimatory behavior. This is demonstrated in Tables 14 and 15 which show the lack of fantasy activity, lack of capacity for group activity, and inability to establish interpersonal relationships.

TABLE 13

AMOUNT OF CHILDHOOD ANXIETY

	Rapist	Homosexual pedophile	Control
Severe	70%	70%	64%
Moderate	26	24	26
Slight	4	6	10

The failure of these men to develop adequate psychological safety valves, such as fantasy release, or normally satisfying and supportive interpersonal relationships, appears to have a direct bearing on their propensity for acting out their conflicts. One explanation for this might be sought in a basic disturbance of intellectual functioning, namely the capacity for making abstractions. An alternative explanation would be the impact of the generally barren, affectless, primitive early environment on these men. We are planning to test these hypotheses by analyzing various correlations of our data, since the lack of reparative mechanisms, other than acting-out, has such a significant role in the total adaptive pattern of the sexual offender. This is in sharp contrast to those individuals, with equally severe sexual conflicts, who never act out their problems in antisocial patterns, using fantasy and various types of symptom formation instead.

The evaluation of the failure of the normal restraining mechanisms of conscience in the offenders has been attempted in several ways. In the classical description of the "psychopath," the absence of feelings of guilt is always stressed, since guilt is generally considered to be one of the important restrain-

TABLE 14

FANTASY ACTIVITY

	Rapist	Homosexual pedophile	Control
None to rare.....	43%	39%	42%
Moderate	50	32	42
Excessive	7	29	16

TABLE 15

GROUP MEMBERSHIP

	Rapist	Homosexual pedophile	Control
Much	7%	15%	2%
Moderate	20	19	28
None	73	66	70
Isolated from crowd.	37	66	40
Inactive in crowd....	40	19	44
Active in crowd	23	15	16
No friends	47	66	56
Friends occasionally .	23	25	24
Friends generally ...	30	9	20

ing mechanisms in a healthy personality. Table 16 indicates the generally intense guilt feelings in all 3 groups, with the pedophiles showing greater severity than the other 2.

This guilt is present in spite of the finding of some too-marked deficiency in the restraints on behavior exercised by the individual's conscience. The most severe disturbance is shown by the control group, with the rapists next, followed by the pedophiles. The pedophiles also show a tendency toward a more restrictive type of conscience. The most significant finding is the lack of a single case with a normally strict, yet adequately flexible, type of conscience (Table 17).

Psychological evaluations tend to confirm the clinical appraisals given above. Most of the sexual offenders present a picture of very rigid conscience control, so inflexible, and under such chronic stress, that the possibility of a breakthrough of repressed impulses is greatly increased. This is indicated in Table 18, which is an estimate of the success of the control mechanism.

While only 3 groups are shown here, the total material indicates an increasing degree of difficulty with control, with the rapists at the better end of the scale, although showing definite problems with control, through the heterosexual pedophiles, to the homosexual offenders. The generally better control in the rapists is further demonstrated in the sizeable percentage who commit an offense only in a state of altered consciousness. For the sex offender, this means when under the influence of alcohol. One very interesting finding is the almost total lack of narcotic users or addicts among the sex offenders. Only 1% of the sex offenders were chronic addicts, and 5% were occasional users of drugs. This contrasts sharply with the long-term figures of 15% drug users in the total prison population, and, in the past 3 years, figures of 25-30%. This is also in marked contrast to the general conception of the close relationship between "dope and sex."

Space does not permit a full discussion of the many other factors that appear to be related to the defective conscience in the offenders. The incorporation of very inadequate, antisocial, or severely emotionally disturbed parental figures appears to have considerable significance. Another important factor, reflected in the disturbances in the early family relationships of these men, is the lack of *any* person to use as an identification figure. In 50% of the sex offenders, for example, the father has been absent from some point in early childhood, with relatively poor surrogate replacements. We are hopeful that multiple factor analysis may give us more direct explanations of this critical problem of loss of control.

In the past, most therapeutic efforts with sexual offenders have been relatively unsuccessful. This has certainly been the experience in prisons in general, and was our own experience initially at Sing Sing, when treatment consisted mainly of individual and group psychotherapy. Therapists have included psychiatrists, psychologists, and psychiatric social workers, all with considerable professional experience and skill. Treatment has, in the main, followed psychoanalytic dynamics, although none of the men can be considered to have been in psychoanalytic therapy. Several men, however, have been in treatment for periods up to 3 years.

TABLE 16

GUILT FEELINGS

	Rapist	Homosexual pedophile	Control
None	7%	6%	16%
Slight	33	15	18
Moderate	37	40	40
Severe	23	39	26

TABLE 17

RESTRAINING EFFECT OF CONSCIENCE

	Rapist	Homosexual pedophile	Control
Severe rigidity	0%	6%	2%
Over restrictive	26	25	20
Normal flexibility	0	0	0
Some deficiency	60	47	58
General deficiency	14	22	20

TABLE 18

SUCCESS OF CONTROL MECHANISM

	Rapist	Homosexual pedophile	Control
Essentially continuous control	0%	0%	0%
Lapse in altered consciousness	23	10	16
Occasional lapse	30	21	30
Frequent lapse	40	48	34
Chronic dyscontrol	7	21	20

Because of the lack of significant improvement in the majority of the men treated in individual or group psychotherapy, in November 1953 permission was obtained to employ organic therapies of various types on inmates at Sing Sing Prison, with special emphasis on the sex offender group. In the past 18 months 31 sex offenders have been treated with an intensive type of electroconvulsive therapy. In addition, 10 other men, several of them in our offender control group, have been treated with the same technique. The immediate posttreatment results in this group show more initial promise than anything else to date, 53% showing much improvement, 38% moderate improvement, and 9% little improvement. Some change toward better adaptation was seen in all the men. These evaluations are on both a clinical psychiatric level, and on comparison of the psychological test performance before and after treatment. Improvement here is taken to mean a decrease in symptoms, lessening of anxiety, and the appearance of *greater control of impulses*. Both the clinical material, as seen in dreams and free association, and the psychological testing seem to indicate a change in the pattern of sexual adjustment. Final evaluation of all these points must, of course, await long-term follow-up studies of these men, particularly of their performance on parole.

In addition to electroconvulsive therapy, a number of men have recently been started on some of the newer drugs that have been introduced in the field of psychiatry in the past year. This project is in its infancy, and cannot be evaluated as yet.

The alteration in the adaptational patterns of the men who make a successful posttreatment adjustment may be one of the most useful areas of investigation in attempting to construct predictive devices. This will apply both for probation and parole performance, and for prediction of the potential for further, and more serious, antisocial behavior in men apprehended for minor sexual offenses, or for juveniles who show evidences of sexual pathology, with or without antisocial patterns of behavior. An important finding pointing toward the possibility of early prediction is the history of a sharp change in school and social adjustment, in over half of the group, in early adolescence. This may, of course, simply reflect the developing schizophrenic illness in these men.

Summary

In this paper an attempt has been made to describe some of the psychodynamic factors in the homosexual pedophile. A description of the general research setting is followed by a discussion of 4 general formulations of the psychodynamics of the sexual offender. These are:

1. A consideration of the serious nature of the psychopathology present in the men studied, with indications that 76% of the homosexual pedophiles are using some type of schizophrenic adaptation.

2. The existence of marked fears of approaching an adult female sex object, with corresponding genital diminution fears.

3. Serious impairment of the capacity for abstract thinking, with impaired ability to utilize fantasy or other mechanisms involving abstractive capacity as an outlet for sexual conflicts and tensions.

4. Serious impairment of conscience formation, and resultant impairment of the restraining effects of conscience on overt behavior.

The serious character of the psychopathology in the sexual offenders makes therapeutic approaches, based on the formulation that these are primarily psychoneurotic disturbances, quite ineffective. Some of the therapeutic efforts utilizing organic therapies, particularly electroshock, are described.

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DISCUSSION

PAUL H. HOCH, M. D. (New York City).—Dr. Glueck found that 76% of homosexual pedophiles show some form of schizophrenic reaction. Most of the patients can be classified as either pseudoneurotic or pseudopsychopathic cases of schizophrenia, but a considerable number show a conventional symptomatology of schizophrenia. His findings are in agreement with our observations. We have stated repeatedly that sexual aberrant behavior is very common in schizophrenia. Not taking into account the schizophrenic background of these sexual aberrations leads to many improper dynamic formulations. It became customary for instance to explain that the schizophrenic breakdown of many individuals is due to a homosexual conflict, while investigations clearly indicate that their adaptative impairment goes far beyond the homosexual conflict situation. The fear that is present in these individuals in approaching an adult female sexual object is usually secondary to fears concerning interpersonal relationships in general and it is much more profound than simply a genital fear. The interpersonal relationships of these persons are usually disturbed for a long time before the specific homosexual situation develops. In most instances the homosexuality is a sequence or consequence of the general personality disturbance and not the other way around. It also has to be mentioned that in many of these schizophrenic homosexuals other so-called pregenital or paragenital gratification patterns are present simultaneously. This in itself contradicts any schematization which is offered as an explanation of the homosexuality of these persons. Actually what we see here is a chaotic and fragmented sexuality. Homosexuality is usually only one facet of the lack of sexual integration. For instance in the material of Dr. Glueck there is more involved than homosexuality and fear of adult women. This is a special group even among homosexuals because they are, in addition, homosexual pedophiles. A fear of adult sexual contact is operating as a complicating factor of homosexuality which is usually indulged in between adults.

Dr. Glueck tries to explain the practices of these persons as due to a serious impairment of their capacity for abstract thinking and with impaired ability to utilize fantasy as an outlet for their sexual conflicts and tensions. I have no doubt that the usual impairment of abstraction ability will be present in a group of persons who are schizophrenic. Nevertheless, I am not too sure that this impairment will explain the sexual anomaly which is present. We see quite a number of schizophrenics even with marked impairment of abstraction ability, who do not act out their sexual difficulties. Furthermore, most sexual aberrations are thought of and practiced for quite a while in fantasy before they are translated into action. Impairment of fantasy and abstraction ability on psychological tests does not necessarily mean the absence of aberrant sexual fantasies in these persons. Why in some individuals sexual aberration remains in the realm of fantasy and in others finds overt expression is still unclear.

Dr. Glueck also feels that the impairment of the superego is a factor here. This cannot be denied. On the other hand the superego organization of schizophrenics is not too well studied. The striking fact emerges—if we investigate—that in the same individual we have very strict conscience structures in relationship to some moral issues and a nonexistent one for others. As in many other fields the uneven development or the arrested development of emotional integration is most striking in these persons. A great many of them speak of an emotional emptiness, inability to feel, and an inability to contact or remain in good contact with reality. Some of the acting out of these individuals is done not only for sexual gratification, which is sometimes not even marked, but for an emotional reinforcement with which they are able to feel more in contact with the environment than otherwise.

Dr. Glueck also makes interesting observations as to the treatment response of these patients, electroshock being superior to psychotherapy. I believe that ECT was able to reduce some of the chronic depression of these patients or the marked emotional charge accompanying their conflicts. However, I have doubts that the actual sexual aberration was changed very much by this treatment and further investigations in this field would be of great importance.

THE HOMOSEXUAL IN COURT[1]

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This is an extremely difficult subject for valid generalizations. Since most statutes on homosexuality provide a rather broad range of discretion on the part of the sentencing judge, and since judges, even on their own admission, are human beings, we can expect a marked disparity in severity of sentences. Penal sanctions naturally reflect the basic attitudes of the sentencing judge. These are dependent upon his convictions and his prejudices, born of his early training, his life experiences, his religious beliefs, and, perhaps above all in this area, upon his psychosexual make-up.

In the preparation of this paper I made inquiry in regard to the attitudes toward homosexuality displayed by the judges in the Court of General Sessions of New York, probably the most important criminal court in America. A daily observer of the court's activities and an individual, in my opinion, of great reliability wrote:

> There is no general attitude of the General Sessions Judges toward homosexuality. Each one of the 9 General Sessions Judges has his own personal, individual attitude toward homosexuality. These attitudes run from the most punitive to the most realistic. Some of the judges feel that it is a crime more abhorrent than armed robbery. Other judges feel that so long as no general nuisance is created that it should not be considered a crime at all. There is no agreement among judges on this subject.

In further effort to discern current attitudes toward sexual crimes and, particularly, to measure the effect of Kinsey's work, I asked Professor Kinsey for his view of present trends. He replied:

> In general, sex laws throughout the United States have continued to increase the penalties and to include a wider variety of sexual acts as crimes.

Why there exists in this country this trend toward the use of harsher penal sanctions against homosexuality and other sexual offenses, while there is in general an ameliorating trend in most countries, is a baffling problem.

In a memorandum on "Present Trends in European Sex Crime Legislation," prepared by Gerhard Mueller for the Illinois Commission on Sex Offenses, he points out that mutually desired homosexual relations between adults is not today considered to be a civil crime in most Catholic countries and was not so considered under the Code Napoleon. He states that the new Danish code has made sex offenses primarily a medical problem and has given the medical authorities almost complete control of the disposition in such cases. Bestiality is no longer a crime in East Germany. West Germany has recently given up the death penalty for rape. And so it goes, nowhere does he report a stiffening of penalties abroad.

A recent privately circulated report on the problem of homosexuality prepared by the Moral Welfare Council of the Church of England recommends that sodomy, unless force or age disparity is involved, should not be considered a crime. In this report, the Church does not condone the offense, which it notes had been declared under an act of Henry VIII, "the abdominable crime not to be mentioned among Christians," but it considers it a religious rather than a civil issue. In speaking of the homosexual it states that the Church "may expect him by the grace of God to resist the temptation to which his condition gives rise."

Professor Louis B. Schwartz of the University of Pennsylvania Law School has prepared an excellent report on Sexual Offenses for the Criminal Law Advisory Group of the American Law Institute, which is now in process of writing a Model Code of Criminal Law. In it, he proposed to exclude from the criminal law all sexual practices not involving force, adult corruption of minors or public offense. This recommendation has been accepted by the Council of the Institute.

One of the great problems in dealing with homosexuality, in fact with all paraphilias, is that such offenses are not always committed by paraphiliacs. Strictly speaking,

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[1] Read in the Section on the Legal Aspects of Psychiatry at the 111th annual meeting of The American Psychiatric Association, Atlantic City, N. J., May 9-13, 1955.

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this is more the concern of psychiatrists than of the courts. In the eyes of the Law, the offense is paramount and the offender is of secondary importance. But, we are all aware that there has been a general shift in emphasis. With the growing use of probation and parole and the advent of such legislation as the sex-psychopath statutes, the focus is now upon the offender as well as upon the offense. In this area, psychiatry must be of the very greatest assistance to the courts. The psychiatrist is better equipped than anyone else to measure the meaningfulness of behavior—was the act a chance occurrence or was it the expression of an inveterate need that is poorly controlled? This should prove to be a vital datum in the disposition of any case, particularly in cases of sex offenders.

Since the tendency toward paraphilias, and particularly toward homosexuality, is so general, necessarily many problems of degree arise. I recall that on practically every visit that I made as a consultant to Fort Lee, Virginia, the Commandant of the WAC Training Center would discuss with me the virtual witch hunts, carried out by the Inspector General's Office, because a couple of the trainees had been seen walking hand in hand or kissing each other.

All of us, I am sure, have seen adolescent youths, rigidly suppressing their need for heterosexual expression and suddenly overwhelmed by the force of their sexual drive, become involved in a homosexual act. Then, there are the individuals who have on a few occasions become involved in homosexual relations only when their superegos have been sedated by effective doses of alcohol. These individuals are not true homosexuals and are often treated with leniency by the courts. However, if the sexual objects are boys or if any force is involved in the offense, the attitude of the court is likely to be far more punitive, unless competent psychiatric study is available to the court and the psychiatrist's recommendation is favorable, based on his belief that the crime is essentially alien to the defendant's ego or that the defendant is a good prospect for psychotherapy.

Five years ago the Court referred to our clinic a 40-year-old white man for examination. This man had approached a colored policewoman, who was not in uniform, while she was talking with two uniformed police officers. He called her aside and offered her the 92 cents that he had in his pocket to perform fellatio with him, partially disrobing during the proposal. On examination, the patient professed an amnesia for the episode, which was only partially dispelled under pentothal. The electroencephalogram was negative.

The patient's history indicated that he was a profound neurotic, subject to severe anxiety attacks since his only brother had committed suicide by shooting himself in the head, shortly after discharge from a state hospital, 10 years before.

He suffered severely from claustrophia. He had not been to a movie in 7 years. To avoid crowds, he attended 6 o'clock mass and stood in the back of the church, next to an exit. He walked the 6 miles back and forth to work daily, because he generally became panicky on buses.

On the day of his offense his wife coerced him into going downtown to pay a bill to a finance company for her. Since they lived in a remote section, this necessitated using buses. He suffered acutely on the trip into town. On the return trip, things became unbearable. He said, "The walls seemed to be pressing in on me, so I got out and started walking. I went into a store to get a cold drink, but it was crowded, so I got out. I remember leaning against an iron railing. I put my head down, everybody was looking at me, so I went on. I saw a nigger woman. I thought she was a pick-up. I figured she was queer and might suck me off. It was the first thing that came to my mind, somehow. I figured I was having a nervous breakdown—like I was going crazy like my brother. I felt she'd take my mind off myself."

The psychiatric report recommended probation and psychotherapy. The patient's very interested employer made it possible for him to get treatment. During the 5 years that have elapsed, the patient has got into no further difficulties and his psychiatric condition has greatly improved.

This case, it seems to me, illustrates clearly that a paraphiliac offense does not necessarily indicate that the offender is a true paraphiliac.

On the other hand, we are all aware of the fact that sexual pathology can be the basis for many crimes that are not overtly sexual in nature. To illustrate, I shall present the case of a 21-year-old white man convicted of assault with intent to kill.

The patient had been recently discharged from the army. While serving on Okinawa and in Korea, he had 2 gonorrheal infections. He had been a patient on a locked psychiatric ward in Korea after threatening suicide, because of a frustrated love affair with a prostitute. The girl's profession would seem to have particular significance in view of his mother's sexual activities.

The patient was an attractive, extremely neat, little man, 5 feet 3½ inches tall, weighing 120 pounds. He was a very bright fellow, and had graduated from a good preparatory school at 16. His mother's lover, a wealthy man, had paid the tuition. This

man had since married the patient's maternal grandmother. At 17 he enlisted in the Air Force.

He said of his mother, "Of course, I love her very much. She has always done what she thought right for me but she has impulses and whims that get the best of her. She has been more like a sister, in fact most people take us for brother and sister. She likes that. She used to be very beautiful. She is a very frivolous person and I don't approve of that, but we do understand each other."

The patient stated that from about the age of 13 to 15, he had a number of homosexual experiences with boys at school. He said that he had been approached by many homosexuals while he was in the army but rejected them, commenting, "I can not stand them, it disgusts me."

After his return to Baltimore from the army, he became involved with a girl in nurses' training. She was a virgin. They began having frequent sex relations. On a couple of occasions he was impotent. On the afternoon of December 31, he and his mother began drinking whiskey together in early celebration of the New Year. Toward evening his girl joined them and the three drank together. His mother left about eight to go to work in a night club. He then attempted to have sex relations with his girl several times but could not achieve an erection. At 1 o'clock he took her back to the hospital and started for the night club where his mother worked. En route he stopped at a bar where he was immediately approached by a man who offered him money if he would spend the night with him at a hotel. In speaking of the shooting, the patient said, "I was sitting in a booth with him, he was across from me. He had been paying for the drinks. He offered me quite a bit of money. I had had plenty to drink—I am not sure just what did happen. I remember the fellow tried to put his hand on my leg, under the table. I got to thinking about the money he had on him. I really did not need money, but I figured since he was so anxious to give it to me, I might as well take it from him. I pointed the gun at him. I did not mean it to go off. It struck him in the abdomen. It was just as if I had been watching the whole thing. It seemed like a play." When it was suggested that he might have felt some homosexual response toward this man and was resisting it, he considered the idea quite preposterous. The patient's projective tests also indicated a great deal of sexual conflict.

To me, there is little doubt that we are dealing in this case with a man with strong unconscious homosexual impulses and that his crime was in reality a sexual one. It was an expression of his effort to defend himself against his homosexuality.

The topic that was assigned to me was the Homosexual in Court. I take it that your interest is not so much in theoretical discussion, as in the presentation of data—what are the present-day attitudes of the Courts toward the various types of homosexuality and how does the homosexual fare in the Criminal Court. I do not have the means for securing and scrutinizing such data in any courts other than those of Baltimore, where I have directed the court clinic for almost 25 years. After surveying the problem, I concluded that we could obtain a broader and yet more accurate perspective, if we did not confine ourselves to an analysis of homosexual cases alone, but considered them along with, and in comparison to, the cases of individuals charged with all other types of sexual offenses. We must also bear in mind that Karpman in his recent and very valuable book on sex offenses says, "Virtually all paraphilias relate to unconscious, unresolved homosexuality."

I have taken from our files for study, the last 100 cases of sex offenders that I have personally examined. These are cases referred during 1954, 1953, and the latter half of 1952. My co-workers, Drs. Boslow and Styrt, have seen approximately the same number, but I have not included their cases. I shall not attempt to present any of these cases in detail, nor speculate about their dynamics. The emphasis shall be upon the disposition of the offenders by the courts (see Table 1).

Sex offenders now form about 20% of the cases referred to the Baltimore Court Clinic for psychiatric study. This is in contrast to the 3% to 5% of the total that the sex offenders represented 20 to 25 years ago. This marked increase in incidence of sex offenders referred is not due to any significant increase in sex offenses tried in our courts, because this has been very small, but rather to the fact that the judges have come to recognize sexual criminality as an area of social pathology to which psychiatrists can contribute understanding and counsel of value.

In line with this, it is a matter of interest and satisfaction, that none of these 100 recent sex offenders had been examined in our clinic previously. Several of them had been before the criminal court but none had been referred for examination. Since the clinic's recommendation is followed in more than 90% of the cases of sex offenders, it would suggest that our recommendations do not, at any rate, promote recidivism.

An analysis of the sentences given by more

TABLE 1

Analysis of Homosexual Offenses

Case	Age	Race	Judge	Plea	Charge	Crime	Diag. & recom.	Dispo.	Prev. adult rec.	Remarks
WM..	41	W	1	NG	Assault	Touching genitals of boy in movie	Personality disorder. Prob. with psychother.	Prob. with Psychother.	Police court for fighting	
JS..	23	W	1	G	Assault	Gave 10 yr. boy whiskey. Masturbated boy in park. Inserted finger in anus of boy 8	Severe character disorder. Poor prob. material	3 yrs.	2 conv. larceny of auto	Drunk at time of offense with boy 10 yrs.
UP..	42	W	1	NG	Perv. Pract.	Fellatio with son 13	Not psychotic. Very guarded in examination	10 yrs. (41-yr. total)	None	Conv. of incest with 2 daughters same time
ER..	54	W	1	NG	Assault	Forcing 4 yr. boy to ground, handling girl 10	Severe character disorder with alcoholism. Sentence	7 yrs.	Conv. in Police Courts 1949-1950 for assaults on small girls	
EW..	28	W	1	NG	Sodomy	Anal intercourse boy 14	Borderline intel. Severe char. disorder. Sentence	18 mos.	Larceny auto	
MO..	60	W	1	G	Perv. Pract.	Fellatio with 2 boys 13	Chr. alc.—possible early senile changes. Prob.	Prob.	1 arrest for drunkenness	
RT..	35	N	2	G	Sodomy	Forced anal interc. with boys and men	Confirmed homosex. Aggressive pedophile. Sent.	8 yrs.	2 sent. contrib. delinq. minors. Other conv.—1 for larceny	At time of offen. on escape from sent. contr. to del. of minors
TB..	28	N	2	G	Sodomy	Anal intercourse boy 11	Imbecile. Recom. Commit. State Hospital	Com. to State Hospit.	In State Hospital 1937-1947	While in St. Hosp. involved fellatio
AS..	48	N	2	G	Perv. Pract.	Fellatio with 2 small Negro boys	Chron. alchol. Sentence	1 yr.	Serv. Pol. Court conv. drunkenness	
WD..	74	W	3	NG	Perv. Pract.	Fellatio with boys 11, 13, 14	Senile deterioration. State Hospital	Prob.	None	
AS..	49	W	3	NG	Perv. Pract.	Fellatio with Negro 12	Chr. alcoholism. Sentence	9 mos.	Com. to St. Hosp. 6 wks. 4 yrs. earlier alc. psychosis	Last job: Santa Claus
TG..	51	N	3	NG	Assault	Having 6 yr. boy suck his tongue	Personal. disor. No recommend.	3 mos.	One Pol. Court conv. fighting	

JS..	29	N	4	NG	Sodomy	Anal intercourse with boy 15	Severe mental defective. Comm. State Hospital	Com. to State Hosp.	Pol. Court convict. indec. Assaults 1948 & 51 Indec. Exp. 1951	Psychotic after arrest. Tried after psy. cleared
DB..	16	W	5	G	Perv. Pract.	Fellatio with boys 13 & 14. Force?	Adolescent immaturity. Prob.	Prob.	None	
AG..	19	W	5	G	Perv. Pract.	Fellatio with boys 13 & 14. Force	Chr. homo. Poor prob. or psychotherapy	12 mos.	None	
JJ..	16	N	5	G	Sodomy	Anal intercourse boys of varying ages	Confirmed homo. prostitute. No recommendation	5 yrs.	Police Court deadly weapon	Patient's house hideout for truants, etc.
JR..	16	N	6	NG	Sodomy	Anal intercourse with boy 13	Severe charac. disor. Penal incarcer. during adolescence	3 yrs.		Juv. Court twice for aggres. behavior with boys & girls
SG..	40	W	1	NG	Perv. Pract.	Fellatio in toilet railroad station with man	Homo. Prob. & psychotherapy	Prob. & Psychotherapy	Same offense 6 mos. earlier	Drunk on both occasions
BJ..	41	N	1	NG	Sodomy	Living as man & wife with youth 20	Confirmed homo. very unreliable individual	3 mos.	Prev. conv. for contrib. delin. of minor	In prev. offense masturb. before 3 small boys
RP..	20	N	1	G	Sodomy	Living with man as wife. Man 41	Confirmed homo. no reason to punish	Prob.	None	
EB..	41	N	2	G	Dist. Peace	Anal intercourse with adults	Confirmed homo. prostitute. Sentence	3 mos.	30 conv. in 14 yrs., including perv. pract., prostitution & robbery	Made up as female when arrested
CB..	22	W	3	G	Perv. Pract.	Fellatio in car	Personal. disord. Prob. without verd.	Prob. without verdict	None	In Army subse. hon. discharge
LG..	29	W	3	G	Perv. Pract.	Fellatio in car	Neurotic char. Prob. without verdict	Prob. without verdict	None	Law student, now having psychoth.
WF..	37	N	4	NG	Perv. Pract.	Being masturbated in public park	No psychiat. condition. No recommendation	6 mos.	None	Claims was asleep
KJ..	43	N	4	G	Perv. Pract.	Masturbating man in public park	Chronic alc. with deterioration. Com. to state hospital	Com. to State Hosp.	2 police court conv., minor, nonsexual offense	
BM..	23	W	7	G	Perv. Pract.	Fellatio with adult Negro in car	Borderline intel. Prob. to return to wife in Tenn.	Prob.	None	Patient drunk. Negro suicided after arrest

than a half dozen judges to homosexual and heterosexual offenders in the Baltimore Criminal Courts fails to present the picture of gross discordance that is reported to exist in some courts. There seems to be an unexpected degree of unanimity in regard to the types of cases in which probation should be used and in those to which long prison sentences should be given. One cannot in fairness say of any one of these sentencing judges that he showed an unreasonable attitude toward sexual offenders as a group nor in any particular type of sexual offense. It should be noted that there were representatives of the Protestant, Catholic, and Jewish religions among these judges.

Despite the fact that there are only 26 homosexual offenders in this study, certain conclusions can be made as to the attitude of the courts toward them. These conclusions are also supported by the author's experience with a very much larger number of homosexual offenders.

Homosexual offenses involving only adults are treated with leniency except where one of the individuals is an inveterate professional prostitute or where the acts have been carried out publicly. For example a 6 months' sentence was given to a 48-year-old Negro who was masturbated in a public park in daylight. His partner, a deteriorated chronic alcoholic, was committed to a state hospital. In the case of a soldier and a law student, apprehended while having homosexual relations in a parked automobile, the court followed the clinic's recommendations that probation without verdict be granted, so that the law student would not be disbarred from the practice of law and so that the soldier could receive an honorable discharge from the Army.

Homosexual relations by adults with children showed a marked variation in disposition depending upon several circumstances. In our series only 2 elderly men were involved in this offense. Neither had had previous convictions, both were given probation. This is in line with the disposition in cases of elderly men involved in sexual offenses with girls.

In the homosexual offenses, penal sentences of more than 1 year were given to a Negro boy, 16, who was already an inveterate prostitute and was seducing small boys; a 35-year-old Negro who had forced men and boys to submit to anal relations; a 23-year-old white man who made a 10-year-old boy drunk and then indulged in homosexual relations with him in a park; a 42-year-old white man who involved his son in fellatio; a 28-year-old white man who had anal intercourse with a boy of 14; and a 16-year-old Negro boy found guilty of anal intercourse with a boy 13. In the next-to-last case, a prison sentence was recommended by the clinic because the man's complete lack of frankness and borderline intelligence made him a poor prospect for both psychotherapy and probation. In the last case, that of the 16-year-old Negro boy, a prison sentence was recommended in our report, largely, on the basis of his aggressive sexual behavior toward boys and girls which had brought him before the juvenile court twice previously. We recommended that he be isolated from society until the thrust of adolescent sexual pressure had somewhat expended itself.

Of course, this series of cases is too small to permit statistical evaluation. However, it is of interest to note that probation was given to about one-third of the homosexual offenders and to nearly half of the heterosexual offenders. In both groups nearly a seventh were committed to a state hospital or to an institution for mental defectives. The new Maryland institution, the Patuxent Institution, to which dangerous intellectual defectives and dangerous emotional defectives can be committed on an indeterminate basis, had not begun to function by the end of 1954. No doubt, in the future, certain of the more malignant sex offenders will be committed to this new institution, which is psychiatrically oriented, in hope that some of them can be effectively treated.

Now let us consider briefly the attitudes of the Baltimore courts toward heterosexual offenders, as they are reflected in the sentences given by the criminal court judges during the past 2½ years. Of the 12 exhibitionists, one was given a prison sentence. He was a severe chronic alcoholic, previously convicted of a nonsexual crime. Three were committed to mental hospitals, the others were given probation. Sexual assaults on female children not involving coitus, or attempted coitus,

were treated quite differently in the aged and in young offenders. Of the 9 cases involving men over 55 years of age, 5 were committed to a state hospital and 4 were placed on probation. Of the 12 cases in the younger age group, 6 were given probation, 1 was committed to an institution as intellectually defective, and 5 were given penal sentences ranging from 6 months to 8 years. There is in the author's opinion a good basis for such a distinction. The rate of recidivism is very high in young pedophiles and those offering poor material for psychotherapy should be isolated from the community, preferably for a considerable time. On the other hand, recidivism in the older group of pedophiles is extremely rare.

In the 6 rape cases, none was given probation. One was committed as irresponsible, 2 were sentenced to be hanged, in both cases the sentence was commuted by the Governor, to life imprisonment and 3 were given prison sentences. Of the 4 attempted rape cases, 1 was given a life sentence, 2 were sentenced to 10 years, and 1, in accordance with the clinic's recommendation, was given probation. The man given a life sentence was a 32-year-old white man, who had been referred to the Louisville Child Guidance Clinic for juvenile sexual offenses. As an adult he had served a 10- and a 5-year sentence in Kentucky for sexual offenses. Our report to the court said, "In this examiner's opinion, this man is a serious risk to society and will remain so for an indefinite period."

Of the 5 statutory rape cases, 2 were given probation, 1 was committed to a state hospital, and 2 were given prison sentences. One of these two cases was guilty of regular coitus over a prolonged period with a 13-year-old stepdaughter. The other had impregnated 2 girls, 14 and 15, and had been previously convicted of statutory rape.

Of the 3 carnal knowledge cases, 2 were given probation, the third, a white man who was guilty of coitus with several young Negresses, was given a sentence of 1 year. In Baltimore, which is after all south of the Mason Dixon Line, there appears to be a tendency, on the part of the courts, to deal somewhat more harshly with those sexual offenses in which both negroes and whites are involved.

There were 8 cases of incest. One 16-year-old white boy, involved with an 8-year-old half-sister, was returned to the school for defectives. Six were given prison sentences, 4 for 10 or more years. These 4 were all very aggravated cases. One man had incestuous relations with 2 daughters and practiced fellatio with a 13-year-old son. Another man had incestuous relations with 3 daughters, 11, 14, and 15, and impregnated a 13-year-old stepdaughter. The third man practiced cunnilingus and had incestuous relations with 2 stepdaughters for a period of more than 5 years. The fourth case of incest that resulted in a long sentence was that of a 27-year-old Negro who gave his 9-year-old daughter a sleeping pill and then brutally raped her. Although all these 4 men gave evidence on psychiatric examination and on projective testing, of having seriously warped characters, none of them, in our opinion, could be considered truly psychotic.

The one case of incest given probation represents the very great difficulty that is often involved in making psychiatric recommendations in the cases of sexual offenders. In this case a white man, 31 years of age, had sexual intercourse with his 9-year-old daughter, although there was no actual penetration. The child, a bright and extremely attractive little girl, was obviously in great conflict over her role in the case. She accused her father, then she denied his guilt, later she reaffirmed it. The man and his family had come from the Kentucky coal mining region 6 months before. He, his father, his mother, and his wife all had jobs at the Bethlehem Steel Works near Baltimore. He had at times been heavily alcoholic but had not been drinking since coming to Baltimore, except on the night of the offense. On that night, the patient's wife had a violent quarrel with him over his drinking, before she left for her job on the night shift as a sorter in the tin mills. The following is an abstract from the report of my interview with the little girl:

> She said her father was earning about 86 dollars a week at Sparrows Point. In fact, some weeks he earned 90 dollars. Her mother, on the other hand, only makes 30 dollars from her work as a sorter.
>
> When asked whether her original story was true, she said, "It really happened." She was then asked why she had denied the truth of the story and she

said, "There is some things I don't get while daddy is away, clothes and shoes and ribbons and stuff to fix your hair with. Sometimes I cannot even get paper but the teacher does give it to me sometimes. I want daddy out so he can come home and live with us. I know he won't do it anymore. It was the first time in a year that he drank. He makes a lot of money and can support us good. By the time my mother pays rent and the baby-sitter, there is no money for food. She had to borrow money from Mrs. D. to buy shoes to come down here with. She don't get her pay until Friday."

Billie Jean was then asked whose idea it was to retract her story of her father's sex relations with her. She said, "It was my idea because I want daddy back." She was then asked what made her change her story again to the original account, and she said, "That was my idea too. I'm glad I got it off my chest, I would be in misery the rest of my life." She then asked the examiner, "Will daddy get hung?" Asked how she got such a notion, she said, "My mother told me that to get me to lie to get him out."

The impression and recommendation to the Court in this case concluded as follows:

What disposition of this offender would be best for this promising little girl, who certainly must have been adversely affected by the whole experience, it is very difficult to say. Taking the child away from her parents and sending her to a foster home would seem, to this examiner, hazardous, since she has strong attachments to her family. Incarceration of the patient will probably make her dependence on him even greater because of her own feelings of guilt in the situation and her acute consciousness of economic factors.

The judge considered the disposition in this case for some time. He went over the psychiatric report with great care, and discussed it and various phases of the problem with the psychiatrist. He finally decided to put the man on probation. The probation period has now expired without any violations.

Conclusions

I believe that we are justified in making certain deductions as to the attitudes of the judges of the criminal courts of Baltimore in the cases of homosexual and heterosexual offenders. For the most part, the same general trends can be seen in regard to both types of offense.

1. During the past 25 years, the courts have come to consider sex offenders as individuals who should be referred to the medical office for a psychiatric report.

2. There appears to be little variation in the attitudes of the 7 judges, who have been in the Baltimore Criminal Courts during the past 3 years, toward the various sex offenses.

3. Sexual offenses entered into willingly by 2 adults are viewed benignly, unless public affront is involved or unless one of the individuals is an aggressive prostitute.

4. Sexual offenses by adults with children are viewed rather benignly if the adults are beyond 55, they are treated much more harshly if the offender is in the younger age group.

5. Sexual crimes of violence, whether they involve children or adults, are treated as very serious offenses.

6. Incest is considered one of the more grievous sex offenses.

7. Exhibitionism is considered an offense of very minor importance.

8. The disposition of sexual offenders is in agreement with the recommendations in the medical office's psychiatric reports in well over 90% of the cases.

9. There appears to be no real difference in the attitudes of the Judges of the Criminal Courts of Baltimore toward homosexual and heterosexual offenders.

GENETIC ASPECTS OF PREADOLESCENT SCHIZOPHRENIA [1]

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The assumed relationship between childhood schizophrenia and the adult schizophrenia group calls for adequate statistical evidence and a generally valid etiologic explanation. Since most schizophrenic psychoses manifest themselves only after adolescence, there must be an important factor or combination of factors which in some cases leads to clinically recognizable symptoms at an unusually early age, that is, before age 15. In the period 1948-1952, the proportion of patients under 15 years of age, classified as schizophrenic upon admission to a licensed hospital in the State of New York (15), averaged only 1.9% of all schizophrenics admitted, and 0.6% of all first admissions.

Called *dementia praecocissima* by Kraepelin(12) on phenomenological grounds, and defined by Bender(1) as a clinical entity occurring before age 11, the earliest or childhood type of schizophrenia has been ascribed either to disturbed parent-child relations, or to an early effect of the same genotype assumed to be responsible for the basic symptoms of adult schizophrenia. Obviously, however, neither theory explains satisfactorily why schizophrenic phenomena may sometimes be activated before adolescence. Little is known, for one thing, about the mechanisms which seem to protect the majority of carriers of the schizophrenic genotype from early expressions of the gene-specific deficiency state underlying the adult form of the disease. For another, it cannot be said that the home milieu of all adult cases is undisturbed throughout childhood. Very fine parents may have a schizophrenic child, and schizophrenic mothers may have more phenotypically normal than abnormal offspring. But it should also be borne in mind that schizophrenia in a parent usually tends to have an adverse effect on the social status and emotional climate of the family(4, 7, 8).

PRESENT SAMPLE

In view of the difficulties in obtaining a statistically representative and diagnostically uniform sample of early schizophrenia cases, our investigation into the family distribution patterns of this group (disregarded in our previous twin family studies) was organized on a longitudinal and state-wide basis. Extending to both twins and single-born patients under age 15, our sample of index cases consists of 52 twins and 50 singletons (Table 1). On the basis of the criteria provided by the similarity method (including hematological tests and qualitative as well as quantitative dermatoglyphic analysis), 17 of the twin index cases have been classified as monozygotic, and 35 as dizygotic. The apparent disproportion between same-sex and opposite-sex two-egg pairs is in accordance with expectation and is explained by technical factors operating in the ascertainment of schizophrenic twin index cases. Only 5 pairs have been reared apart, 1 one-egg and 4 two-egg pairs. All of them have been discordant as to childhood schizophrenia, but in the one-egg pair the co-twin developed schizophrenia after adolescence, at the age of 18 years.

The considerable excess of males in both groups of index cases (37 twins, 37 singletons) is consistent with the findings of Bender(1), Bradley(2), Sackler *et al.*(17), and others in early schizophrenia cases. It is further confirmed by the sex distribution observed in the schizophrenic co-twins (18 males, 4 females) and siblings (13 males, 5 females) of the index cases, and by the fact

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TABLE 1

SEX AND PRESENT AGE OF PREADOLESCENT INDEX CASES

	Twin index cases							Single-born index cases		
	Monozygotic *		Dizygotic †		All twin index cases					
Age group	Male	Female	Same sex	Opposite sex	Male	Female	Total	Male	Female	Total
5-9	2	—	—	—	2	—	2	5	—	5
10-14	7	—	8	4	17	2	19	25	4	29
15 and over	3	5	16	7	18	13	31	7	9	16
Total	12	5	24	11	37	15	52	37	13	50

* Including 1 pair reared apart.
† Including 4 pairs reared apart.

that the 11 opposite-sex pairs of our sample include only 2 pairs in whom the female has been the index case.

Additional evidence for the increased vulnerability of the preadolescent male is provided by a statistically significant sex difference in the ages when the schizophrenic symptoms of the index cases became clinically recognizable. The average age of onset differed from 8.8 to 11.1 years for male and female twin index cases, and from 7 to 9.7 years for the corresponding groups of single-born index cases. These marked differences are not sufficiently explained by sociological factors, such as the reluctance of families to recognize gross personality changes in a girl or to seek hospitalization of an emotionally disturbed girl.

The diagnostic criteria for index cases, like those used in classifying early psychoses in their co-twins and sibs, were generally on the conservative side, as they were chosen with a view to procuring a clinically homogeneous sample rather than a symptomatologically complete one. Thus, very young children who presented the clinical picture of a psychosis with mental deficiency, perhaps simulating a severe intellectual defect as the result of a very early schizophrenic process, were not included in the sample, not even in intellectually adequate families with a known history of schizophrenia in one of the parents.

All diagnoses were made by one investigator and strictly on the basis of the clinical history of the child, without prior knowledge of family background. A distinct change in the behavior of a child who previously seemed to develop normally was regarded as a crucial diagnostic feature. The most frequently observed symptoms were diminished interest in the environment, blunted or distorted affect, peculiar conduct especially in motor activity, diffuse anxiety with phobias and vague somatic complaints, bizarre thinking with a tendency toward exaggerated fantasies, and hallucinations. The average period of observation, from the onset of clinically demonstrable symptoms, varied from 5.5 years in single-born index cases to 9.9 years in twins.

No etiologic significance can be attached to the birth order of the index cases. Of 80 cases who had a sibling, 28 were the oldest child of their parents, 27 the youngest, and 25 were in an intermediate position. At the time of the present analysis, 19 twins and 3 singletons were classified as only children. Of the siblings who were alive at birth, 140 were older, and 94 younger, than the index cases.

The ages of the parents at the time of birth of the index cases were within the normal range. The average age of all mothers was 26.8 years, and that of the fathers, 30.9 years. In line with statistical expectation, the mothers of single-born index cases were 4 years younger, on the average, than those of twins (24.7 and 28.7 years, respectively). The observed parental consanguinity rate is 3.0% for the entire sample, and 5.8% for the parents of twin index cases. The ratio of white to non-white index cases is close to 5:1 in the series of twins, and 4:1 in the total sample.

MENTAL STATUS OF THE CO-TWINS

In Table 2, the differential concordance rates obtained for one-egg and two-egg twin

TABLE 2

CONCORDANCE AS TO SCHIZOPHRENIA AND SCHIZOID PERSONALITY

		Number of co-twins	Cases of schizophrenia: Under age 15	Cases of schizophrenia: Age 15 and over	Uncorrected schizophrenia rate: Preadolescent schizophrenia	Uncorrected schizophrenia rate: Total schizophrenia	Expectancy rate: Schizophrenia	Expectancy rate: Schizoid personality
Present study (preadolescent cases)	Dizygotic	35	6	2	17.1	22.9	22.9 *	25.7 †
	Monozygotic	17	12	3	70.6	88.2	88.2 *	11.8
Previous study (over age 15)	Dizygotic	517	6	47	1.2	10.3	14.7	23.0
	Monozygotic	174	8	112	4.6	69.0	85.8	20.7

* Without further age-correction.
† Including 5 cases "suspected" of schizophrenia.

index pairs, with respect to schizophrenia and schizoid personality, are compared with previously computed twin data on adult schizophrenia(6). However, this comparison requires caution, because, apart from the fact that schizophrenics under age 15 (at the time of analysis) were not included in the previous study of 691 twin families, there are obvious differences in the size, age range, and degree of investigative accessibility of the two samples. It is inadvisable, therefore, to correct age differences in the present sample to the same extent as was necessary in the previous study in accordance with the principles of the Abridged Weinberg Method.

Whether age-corrected or uncorrected concordance rates are used, an important finding is that the two zygocity groups differ as much in concordance as to the preadolescent form of schizophrenia as they do in regard to adult schizophrenia. Equally important is the observation that the schizophrenic psychoses in the co-twins of early schizophrenia cases occur sometimes before, and sometimes after, adolescence. If only preadolescent cases are considered, the respective schizophrenia rates vary from 17.1 to 70.6%. In regard to the total schizophrenia group, the range is from 22.9 to 88.2%. The corresponding difference in the adult schizophrenia group is from 10.3 to 69.0% without age correction, and from 14.7 to 85.8% with age correction. Approximately one-quarter of the dizygotic co-twins of early schizophrenia cases have been classified as schizoid. The differences between the schizophrenia rates of one-egg and two-egg co-twins in both samples are statistically significant at the 1% level of confidence, while those between the preadolescent and adult samples are not. It may be concluded, therefore, that preadolescent schizophrenia is determined genetically to the same extent, and apparently by the same gene-specific deficiency state, as is assumed in regard to the adult forms of the disease. The difference between the preadolescent and adult types seems to lie, at least in part, in a number of secondary factors which lower the constitutional resistance or interfere with the containibility of early cases.

THE PARENTS OF THE INDEX CASES

The distribution of normal and abnormal parental personality characteristics (Tables 3 and 4) shows that the cause of an early

TABLE 3

AGE DISTRIBUTION AND MENTAL STATUS OF THE PARENTS

	Number of parents: Living	Number of parents: Dead	Number of parents: Total	Mental status: Normal	Mental status: Schizophrenic	Mental status: Schizoid	Mental status: Unstable, asocial or retarded	Mental status: No adequate information
25-34	30	1	31	2	7	6	13	3
35-44	85	4	89	21	3	18	37	10
45 and over	71	13	84	18	8	22	30	6
Total	186	18	204	41	18 *	46 †	80	19

* Consisting of 9 fathers and 9 mothers.
† Including 10 cases classified as "suspected of schizophrenia."

TABLE 4

PREVALENCE OF SCHIZOPHRENIA AND SCHIZOID PERSONALITY IN THE PARENTS

	Number of parents		Number of cases			Frequency in per cent: Schizophrenia		
			Schizophrenia					
	Under age 45	Age 45 and over	Fathers	Mothers	Schizoid personality	Without age correction	Age corrected	Schizoid personality
Present study (preadolescent cases)	120	84	9	9	46	8.8	12.5	22.5
Previous study (691 adult twin index cases)	134	1057	46	62	415	9.1	9.2*	34.8

* Schizophrenia rate for 1,832 parents of adult single-born schizophrenics (1938): 10.3%.

onset cannot be sought in a comparatively high prevalence of schizophrenia in the mothers of childhood schizophrenia cases. Neither a difference between the schizophrenia rates of mothers and fathers nor a statistically significant increase in the total parental schizophrenia rate expected on the basis of observations on the parents of adult schizophrenics is revealed by these data. Approximately one-fifth of all parents (20.1%) are classifiable as normal, and nearly 15% of the index sibships investigated have two phenotypically normal parents. Over one-third of the parents have been diagnosed as emotionally unstable, asocial, or intellectually subnormal (39.2%), and another 22.5% as clearly schizoid. Overt schizophrenic phenomena have been observed only in about one-tenth of the parents, although higher figures are reported by other investigators.

The parental schizophrenia rate in the present study is 8.8% without age correction and 12.5% if corrected for age differences in the same way as our previous data (Table 4). Both figures are in close agreement with the schizophrenia rates of 9.2% and 10.3% computed in 1946 for the parents of adult schizophrenic twins (6) and in 1938 for the parents of adult single-born schizophrenics (4). The small rise to 12.5% in the parents of preadolescent cases is probably due to chance or may indicate only that the present population of schizophrenics has a slightly better chance of becoming parents than was true in our previous samples.

FULL SIBLINGS

In the sibships of the index cases, only the sample of full sibs (Table 5) is sufficiently representative and advanced in age to warrant analysis. In addition, there are 19 step-sibs and 66 half-sibs, but 8 step-sibs and 37 half-sibs are either unavailable or under 10 years of age. No case of schizophrenia has been found in either group.

Of the 199 full sibs over age 4, about one-half (54.8%) have been classified as normal,

TABLE 5

MENTAL STATUS OF THE FULL SIBLINGS WITH AGE AND SEX DISTRIBUTION

	Number of siblings			Mental status						
					Schizophrenic: Age at onset					
	Brothers	Sisters	Total	Normal	Brothers	Sisters	Total (present age)	Schizoid or very unstable	Asocial or retarded	No adequate information
0-4	13	22	35	21	—	—	—	—	—	14
5-14	50	52	102	57	11	5	6	13	8	18
15-24	39	40	79	43	2	—	11	4	9	12
25-44	5	7	12	7	—	—	1	—	1	3
45 and over	2	4	6	2	—	—	—	2	—	2
Total	109	125	234	130	13	5	18	19*	18	49

* Including one case classified as "suspected of schizophrenia."

although, with the exception of 4 brothers and 5 sisters, they were reared together with the index cases until at least age 14. Of the remaining sibs, 28 are emotionally unstable or delinquent (14.1%), and 9 are mentally defective (4.5%). Of the 18 schizophrenic sibs, 13 are boys, two of whom showed no clinical symptoms before age 15. If all "not normal" sibs over age 4, about whom it has been possible to obtain adequate information, are considered, only a little over one-half (56.4%) shared a home with the index cases.

The total schizophrenia rate for full sibs varies from 9.0% to 12.2% (Table 6), depending on the method used for correcting differences in age. Either figure corresponds satisfactorily with previously compiled sibship rates in adult schizophrenia samples as well as with the schizophrenia rate obtained in the present study for the co-twins of early schizophrenia cases. The difference between 12.2% (sibs) and 22.9% (co-twins) is below the level of statistical significance. But it may in part reflect the fact that many of the sibs in the present sample are still younger than the index cases and their co-twins and are, therefore, too young to develop even early schizophrenic symptoms.

Another statistical discrepancy, more difficult to evaluate, is the difference in early schizophrenia cases observed between the two groups of sibs, those of preadolescent (8%) and adult (1.7%) index cases. At least in part, this discrepancy may be explained by the fact that in a study of adult cases it is methodologically less important and technically much more difficult to trace the onset of clinical symptoms to the preadolescent period, especially when a diagnosis of early schizophrenia is to be made without the benefit of personal examinations at the crucial age level.

Apart from this uncontrollable difference in clinical certifiability, however, it cannot be precluded that the sibs and dizygotic co-twins of preadolescent index cases tend to develop an early form of the disease more frequently than those of adult cases. At this time, the possible excess of early schizophrenia cases may be less safely substantiated than that of males over females in the preadolescent group; but there can be no doubt that the possibility of an excessive tendency to early schizophrenic phenomena in the sibs of early cases is etiologically of sufficient interest to call for further investigation, both on genetic and ecological grounds.

The reduced expectancy of schizophrenia in girls under age 15 has often been ascribed to their more protected position in modern society. However, this explanation is questionable in view of reports of similar sex differences with respect to childhood disorders which are not easily influenced by a preferential attitude toward the female. The list of these conditions is quite diversified and includes neonatal mortality(18), congenital malformations(14), mongolism, and mental deficiency due to birth trauma or infectious disease(13). According to a recent report of the National Office of Vital Statistics, the present neonatal mortality rate in the United States is 22.7 per 1,000 live births for males, and 17.1 for females.

It is also implausible to explain the lower childhood schizophrenia rate of the female by consistently greater difficulties encountered in girls, as compared with boys, in the

TABLE 6

PREVALENCE OF SCHIZOPHRENIA IN THE SIBLINGS OF SCHIZOPHRENICS

	Number of sibs		Cases of schizophrenia		Schizophrenia rate (persons over age 4)		
						Total schizophrenia rate	
	5-14	Over age 14	Under age 15	Age 15 and over	Preadolescent form (uncorrected	Without age correction	Age corrected
Present study (preadolescent cases)	102	97	16	2	8.0	9.0	12.2
Previous study (adult twin index cases)	87	2014	35	170	1.7	9.8	14.3*

* Schizophrenia rate for 3,712 sibs of adult single-born schizophrenics (1938): 11.5%.

diagnosis of early schizophrenia symptoms. In fact, since the maturation pattern is faster in girls than in boys, girls should cause less rather than more difficulty in identifying early schizophrenic changes—unless the factor of an early personality integration confers a protective advantage upon the female in regard to the development of early schizophrenic symptoms. In any case, it seems justifiable to conclude that much of the sex difference in preadolescent schizophrenia is *biologically* determined.

PARENTAL HOME

The last set of variables which may play a part in precipitating an unusually early onset of a schizophrenic process is related to the quality of the parental home (Table 7). In this analysis, we have used a somewhat simplified and deliberately loaded scheme, combining socio-economic and psychological criteria for classifying the parents' home as well as their personal adjustment. According to this scheme, only those homes have been classified as adequate which (1) appeared good or fair from a socio-economic standpoint, (2) were not "broken" due to desertion, divorce, or death of a parent, and (3) were maintained by two well-adjusted parents. The presence of one emotionally disturbed or socially inadequate parent was sufficient to place the home into the "poor" category, even if there was no economic distress.

Since the entire sample of parental homes includes no unit that has not given rise to an early schizophrenic process in at least one child—namely, the index case—a simple correlation between inadequacy of the home and severe childhood disorder developed in this setting can be tested in the present study only in relation to the adjustive patterns of the sibs and dizygotic co-twins of the index cases. For obvious reasons, the analysis has been limited to family units with adequate information about both the mental status of parents, co-twins, and sibs and the socio-economic quality of their home. Unfortunately, no adequate control data are available on the families and homes of a comparable series of children, of the same age group and social stratification, not distinguished by an early case of schizophrenia in the family. This aspect of the present study has not been completed.

The tabulated data show that of all the homes investigated, 28.6% have been broadly classified as adequate, and 71.4% as inadequate. The proportion of adequate homes is reduced to 18.0% for the co-twins and sibs diagnosed as schizoid or schizophrenic, and to 11.8% for those classified as asocial or mentally retarded. At face value, this part of the analysis indicates a rather close relationship between inadequate home and preadolescent maladjustment in general. In other words, sibships characterized by severe maladjustment in more than one child are not likely to come from adequate homes—a finding which is compatible with both genetic and environmental theories.

It is a truism that parents, who are unable to establish a stable home or fail in the upbringing of well-adjusted children, are often unstable themselves, emotionally as well as socially. However, it is unlikely that the emotional disturbance of the parents stems from the inadequacy of the home, nor can it be said that a poor home is certain to produce early schizophrenia in the children. The inadequacy of the home does not seem to be directly responsible for a preadolescent onset

TABLE 7

MENTAL STATUS OF THE SIBS AND DIZYGOTIC CO-TWINS IN RELATION TO THE QUALITY OF THE PARENTAL HOME (IN PER CENT)

Siblings and dizygotic co-twins over age 4 *	Number of persons		Adequate home			Inadequate home		
	Co-twins	Sibs	Good	Fair	Total	Broken	Poor	Total
Schizoid or schizophrenic	16	34	4.0	14.0	18.0	52.0	30.0	82.0
Asocial or retarded	1	16	5.9	5.9	11.8	29.4	58.8	88.2
Normal	18	107	10.4	24.8	35.2	28.0	36.8	64.8
Total	35	157	8.3	20.3	28.6	34.4	36.9	71.4

* Limited to cases with information available about mental status and parental home.

of schizophrenia, any more than an adequate home can be trusted to prevent it in vulnerable children.

This conclusion is supported by the finding that of those co-twins and sibs in the present sample, who have been considered normal, only one-third (35.2%) have come from adequate homes, and nearly two-thirds (64.8%) from inadequate homes. The large proportion of normal sibs from inadequate homes and the more limited series of schizoid and schizophrenic sibs from adequate homes contradict the notion of a simple relationship between good home and normal behavior or between poor home and mental disorder. While broadly applicable to the formation of general adjustive patterns, these equations are apparently complicated in early schizophrenia by two factors still unidentified biochemically: (1) a gene-specific vulnerability to stress arising from ordinary environmental circumstances, and (2) an apparently nonspecific impairment in the organization of those normal protective functions which bestow on many persons a relatively high degree of resistance to an unfavorable environment.

It seems that children who display schizophrenic personality changes at an early age are distinguished not only by a specific vulnerability factor in the enzymatic range, but also by a general constitutional inability, or lowered ability, to control through compensatory activity this basic deficiency in the complex processes of growth and maturation. Why they fail to compensate for this maturational defect is still an unsolved problem. Studies in progress here and elsewhere are aimed at identifying the nature of this constitutional impairment.

Summary

The investigative data available at this time may be summarized as follows:

1. In comparing the family backgrounds of preadolescent schizophrenia cases (52 twins and 50 singletons under age 15) with those of a comparable adult sample (691 twin index cases), no significant inter-group differences have been found either with respect to twin concordance rates or with respect to the schizophrenia rates for the parents (12.5% and 9.2%) and sibs (12.2%) and 14.3%) of the index cases. Fathers and mothers contribute equally to the parental schizophrenia rate, while two-egg and one-egg co-twins of schizophrenic index cases differ as much in concordance for preadolescent schizophrenia (17.1% and 70.6%) as they do with regard to adult schizophrenia (14.7% and 85.8%). These findings indicate an early effect in childhood schizophrenia of the same genotype (gene-specific deficiency state) assumed to be responsible for the basic symptoms of adult schizophrenia. This conclusion is supported by the observation that the psychoses in the co-twins of early schizophrenia cases occur sometimes before and sometimes after adolescence.

2. While the etiological mechanism underlying the relatively infrequent activation of a schizophrenic psychosis before adolescence has not yet been adequately identified, it would seem to be connected with variable constellations of secondary factors lowering constitutional resistance. There appears to be an increase in the number of early schizophrenia cases among the co-twins and sibs of early index cases, and there is a definite excess of males over females in the preadolescent group. Theories attempting to explain either finding on non-biological grounds lack substantiation.

3. Because of a dearth of statistically comparable data, it is difficult to appraise the part played by a poor home with disturbed intrafamily relationships in the etiology of childhood schizophrenia as compared with that of adult schizophrenia. It is certain only that there is no simple correlation between inadequacy of the parental home and a preadolescent onset of schizophrenia, and that a late onset of the disease is not always associated with favorable home conditions in childhood. In the present study, 71.4% of the homes of all sibs and dizygotic co-twins, and 82% of the homes of co-twins and sibs diagnosed as schizoid or schizophrenic, have been broadly classified as inadequate. In evaluating this finding it is necessary to bear in mind, however, that of all the normal co-twins and sibs, nearly two-thirds (64.8%) have come from an inadequate home identified with the development of schizophrenic phenomena in the index case.

4. Since an adequate home cannot be ex-

pected either to preclude an early onset of schizophrenia in especially vulnerable children or to be easily established in the presence of emotionally unstable parents, the need for systematic and intensified research into the genetic aspects of both preadolescent and adult forms of schizophrenia remains a major challenge to our discipline.

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THE AUTISTIC CHILD IN ADOLESCENCE[1]

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Early infantile autism was first described by Kanner in 1943 on the basis of 11 cases whose features were sufficiently unique to constitute a new and previously unreported clinical syndrome(1). Subsequent publications by the same author have reported extensive experience with a much larger series of cases (2), analyzed the clinical phenomenology(3, 4), discussed its nosological allocation(5), and inquired into its genesis(6). Since the original papers, there have been numerous publications, both in this country(7-15) and abroad(16-22), which attest to the widespread recognition of infantile autism as a clinical syndrome(23). It remains a challenging problem, both because of its position as the earliest psychosis known to occur in childhood and because of its similarities to, and differences from, childhood schizophrenia. It becomes a matter of especial interest, therefore, to study the subsequent careers of children so diagnosed at an early age in order to determine the "natural history" of the syndrome. This may serve to shed light on the question of its specificity and contribute to an understanding of its psychopathology(24).

METHOD

The problems besetting follow-up studies have recently been critically reviewed by Robins(25). In order to facilitate an evaluation of this study, its definitions and its methods will be described in some detail. The cases were selected from the files of the Children's Psychiatric Service of the Harriet Lane Home of The Johns Hopkins Hospital. The original diagnosis was based upon the conjunction of the two cardinal symptoms which are to be regarded as pathognomonic for early infantile autism: extreme *self-isolation*, present in the first years of life, and *obsessive insistence on the preservation of sameness*(23). All of the children exhibited distortions of language function, ranging from mutism and delayed onset of speech, through echolalia, affirmation by repetition, and pronominal reversal, to highly metaphorical language, employed with little intent to communicate meaning to others(3, 4). Very few of the cases had organic abnormalities of the central nervous system, discernible either to physical examination or laboratory studies; where they did exist, they were inadequate to explain the clinical phenomenology(23).

An attempt was made to follow all of the children, 80 in number, who were known to the clinic for at least 4 years and who had attained an age of 9 or over. Sixty-three of the 80, or 79%, were traced. The 17 cases whose precise outcome is unknown to us were largely patients seen during the war years and for whom only temporary addresses were available. The cases lost comprise only 21% of the total and do not appear to have been selected on any systematic basis; indeed, incomplete (2-3 years) follow-up information on 10 of the 17 exhibits the same pattern as do our over-all results. We feel, therefore, that our data permit the construction of a reliable measure of the course of autism.

Of the 63 cases, 34 are in full-time residential settings and 29 at home with parents or foster parents. We have accurate institutional reports on the first 34, 10 of whom have also been reexamined. Of the remaining 29, 20 were reevaluated at the clinic. In 9 cases living at some distance, our information is limited to letters from the parents, supplemented by school and physician's reports. Follow-up letters from parents, it must be admitted, can be accepted only cautiously, but the usual doubts seem to be less applicable in our cases. We have been repeatedly impressed with the almost uncanny objectiveness and obsessive accuracy of parents of autistic children. In summary, the following analysis is based upon reexamination plus supplementary reports in 30 cases, institutional abstracts in 24 cases, and par-

[1] Read at the 111th annual meeting of The American Psychiatric Association, Atlantic City, N. J., May 9-13, 1955.

[2] From the Children's Psychiatric Service, The Johns Hopkins Hospital, Baltimore, Md.

ents', physicians', and school reports in 9 cases.

Both the median and the average age of the children is 15 years, the range from 9 to 25.[3] Both the median and the average length of the follow-up period is 9 years, the range from 4 to 20. The range is admittedly wide, but the cases are clustered about the medians. Our figures may underestimate the number of children who will get into subsequent difficulties and do not, of course, permit extrapolation into the future. The ratio of girls to boys is 13 to 50, or about 1 to 4, which corresponds to the ratio in our total clinical experience, and there was no significant difference in clinical course between boys and girls.

The follow-up evaluation was classified into 3 categories: "poor," "fair," or "good" outcome. By "poor," we mean a patient who has not emerged from autism to any extent and whose present function is markedly maladaptive, characterized by apparent feeblemindedness and/or grossly disturbed behavior, whether maintained at home or in an institution. By "fair," we mean a patient who is able to attend regular classes in public or private school at a level commensurate with age and who has some meaningful contacts with other people, but who exhibits schizoid peculiarities of personality, sufficient to single him out as a deviant and to cause interference with function. By "good," we mean a patient who is functioning well at an academic, social, and community level and who is accepted by his peers, though he may remain a somewhat odd person. In only 2 cases, both finally classified as poor, was there any question as to which category applied.

RESULTS

Of the total group of 63, 3 can be said to have achieved a good adjustment, 14 a fair one, and 46 a poor one. Thus, a little less than a third are functioning at a fair to good social level, a figure which corresponds to Bender's findings on a larger group of schizophrenic children (26). It is of some historic interest to note that all but Case 4 of the original series of 11 have been followed (1). Of these, all but Case 1 are doing poorly.

It soon became apparent, however, that those children who were so isolated from human contact that they failed to develop, or, once having developed, lost the ability to communicate by speech, did much more poorly than the others. If we choose as the line of demarcation the presence of *useful* speech at the age of 5, the total series can be divided into 32 "speaking" and 31 "nonspeaking" children.[4] The outcome of the first group of 32 can be classified as good in 3, fair in 13, and poor in 16 instances. Contrariwise, the outcome of the 31 nonspeaking children was fair in one and poor in 30 cases. Thus 16 of 32 children with useful speech at 5 years of age have been able to achieve a fair to good social adjustment, whereas only one of 31 nonspeaking children can be so classified. Chi square for this difference equals 15.19, with 10.83 equivalent to a probability value of 0.001, so that the difference between the 2 groups is highly significant (Table 1).

Our follow-up study fails to reveal any correlation between formal psychiatric treatment and the clinical outcome. Of the 16 cases with fair or good outcome, 2 had brief periods of psychiatric hospitalization and only 2 others were followed intermittently on an outpatient basis. In the cases with poor out-

TABLE 1

Category	Poor outcome	Fair or good outcome	Total
"Speaking"	16	16	32
"Nonspeaking"	30	1	31
Total	46	17	63

$$X^2 = \frac{N([AD-BC]-N/2)^2}{(A+B)(C+D)(A+C)(B+D)}$$

$$= \frac{63\,([16-480]-31.5)^2}{32\times31\times46\times17}$$

$$= 15.19$$

$$p < 0.001$$

[3] There are 13 children between 9 and 12 years of age in our group of 61; all fall into the "poor" outcome category. Since our case histories reveal that signs of improvement are evident early, if improvement is to occur at all, we feel justified in including these not yet adolescent cases in our totals.

[4] The category "nonspeaking" includes mute children, those who exhibit only echolalia, and those who may possess in addition a few words, usually employed in a private sense. Its meaning in this context is "unable to communicate verbally with others."

come, a full range of psychiatric treatment—hospitalization, intensive psychotherapy, electroshock, CO_2, and even, in one case, an orgone box—had been applied with only at most temporary change which failed to interrupt the down-hill course. We have, however, been impressed by the prodigious efforts expended by both schools and parents for those children who have improved. We cannot escape the feeling that the extraordinary consideration extended to these patients was an important factor in the amelioration of their condition.

ILLUSTRATIVE CASE HISTORIES

CASE A.—Classification: "speaking," favorable outcome. Donald T., reported as Case 1 in the original series (1), has been followed by this clinic since 1938. Able at 2 to repeat by rote the 25 questions and answers of the Presbyterian catechism, at 5 he was described by his parents as "oblivious to everything about him . . . to get his attention almost requires one to break down a mental barrier between his inner consciousness and the outside world." On examination, he exhibited the pathognomonic features of autism. Distance from the clinic resulted in infrequent revisits through 1941. Some increase in awareness of others was noted as well as gradual use of the first person pronoun, but his modes of thought and expression remained highly idiosyncratic. His inability to participate in family life, his precarious school adjustment, and his anomalous position in a small town where his family was socially prominent led to the recommendation that he be placed with a warm and unsophisticated farm couple without intellectual pretensions. Donald remained in this rural setting for 3 years; moderate improvement was noted, though while on vacation with his parents during this period, his mother reported that his chief interest on the trip was to record carefully the mileage between towns. The boarding arrangement had to be terminated when Donald, at 14, developed an undiagnosed illness manifested by fever, chills, and joint pains. He became bedridden and developed joint contractures. On the basis of a tentative diagnosis of Still's disease, he was placed empirically on gold therapy with marked improvement. After 18 months he was once again ambulatory. He emerged with little residual deficit from a second episode of arthritis 2 years later. The clinical improvement in his behavior, first observed during his rural placement, was accelerated during and after his illness and convalescence at home. He was able to enter and graduate from high school. At present he is doing well in his studies at a Junior College, where he was elected a class officer. He plans to attend a small local liberal arts college. He remains, however, "matter of fact and tactless," little aware of the response of others. His parents, though delighted with his progress, complain that he exhibits "little initiative" and "requires to be prodded" into activities.

CASE B.—Classification: "speaking," poor outcome. Charles, Case 9 of the original series (1), was 4½ when his mother brought him to the clinic with the distressed complaint, "I can't reach my baby." The history of precocious intellectual accomplishments, pronominal reversals, obsessive behavior, and marked detachment presented the classical features of autism. Charles "related" to the examiners only in so far as he made demands or became enraged at interference from without. His excellent vocabulary was manifested by the ejaculation of words and phrases that had no function as communication to others. He was referred to the Devereux Schools. During his year of residence there, definite though limited improvement could be noted in his social responsiveness. His parents, however, dissatisfied with the slowness of his progress, removed him against advice in order to hospitalize him at another institution where he was given a course of electroconvulsive therapy. Almost at once, marked regressive trends were noted and it became necessary to place him in a state hospital because of outbursts of aggressive behavior, soiling and smearing, and further withdrawal. At 8 he was transferred to an intensive therapy center in a children's unit. There he displayed "disorganized and regressive behavior . . . incoherent and irrelevant speech . . ." His failure to respond to therapeutic efforts led to his removal to a state hospital at 13. Now 15, he exhibits "schizophrenic deterioration . . . emotional blunting interrupted by periods of excitement . . . [he is] withdrawn, disoriented, unclean, destructive, and frequently depressed . . ."

CASE C.—Classification: "nonspeaking," fair outcome. George O. was so withdrawn and inaccessible that, at 3, institutionalization for severe retardation had been recommended. When seen at 4, he stood on his toes rocking and humming, oblivious to his surroundings. Only his detachment and the history of obsessiveness served to distinguish him from a feebleminded child. His father, a very successful physician, had little to do with his children. Interaction between mother and child was graphically illustrated when she was requested to place him on her lap. The two sat much like an Assyrian statue, rectangular, distant, rigid. The mother herself hardly looked the role of a prominent person in the community; she was bedraggled, vague, and defeated. She showed the first sign of awakening interest when foster placement for her child was suggested. This stirred obvious resentment and resulted in a decision to take over George (and herself) as her own responsibility. Over the ensuing years, with infrequent counselling at the clinic, a remarkable change in both mother and child could be observed as a symbiotic relationship developed. Mother took interest in her appearance, became more animated, and much more alert to her child's needs. George began to speak, was able to attend a small private school and learned to simulate social relations with other children. He became sufficiently accessible to be tested and one year ago achieved a

Binet I.Q. of 91. Now 13, he has just entered 7th grade in a public junior high. Some initial difficulties in the classroom situation were resolved when "other children were taught to treat him right." He illustrated his artistic proficiency, much to his mother's pride, by sketching a lovely landscape while sitting in the waiting room; characteristically, his drawings never include people. He is a wooden, uncomfortable child who exhibits facial grimaces and avoids looking directly at people. He cannot bring himself to shake hands, initiates little conversation, but responds appropriately and intelligently. He can still be recognized as a disturbed child, but the change from the 3-year-old child who was diagnosed as severely retarded is impressive and gratifying.

CASE D.—Classification: "nonspeaking," poor outcome. Virginia, case 6 of the original series (1), at 11 exhibited almost total indifference to her surroundings, uttering not a sound and responding to no verbal requests. So detached had she been as a child that deafness had been suspected by a number of physicians but careful audiometric examination revealed normal threshold to sound. At 5 she had been placed in a state training school for the feebleminded. There she stood out from the group because of her self-imposed isolation and her single-minded pursuit of her own interests (such as puzzle solving) for hours. Yet at 7 she achieved an I.Q. of 94 on Merrill-Palmer performance tests, which, in the opinion of the examiner, "underestimated her capacities." He stated: "Her performance reflected discrimination, care and precision . . ." At 8 on the Pitner-Patterson "her performance was never inferior to her own chronological age . . . with some scores in the superior range." Repeated efforts by staff members to reach this child over the years have been unavailing. She exhibits no concern about her personal appearance and makes no effort to communicate or socialize with her cottage mates or institutional personnel. She remains on the periphery, hardly bothering to watch when group activities occur. Testing her has become increasingly difficult. Nevertheless, at 21, she scored in the upper 10% of the population on the Kohs Blocks, completing 17 designs correctly, receiving time bonuses on the first 12. On the other hand, she treated the manikin with disregard for content, reversing arms and legs, and could not be induced to attend to it further.

DISCUSSION

Clinically, the degree of disturbance in language function emerges clearly as an important guide to prognosis. In effect, we have an index of the extent of autistic isolation, for the development of language obviously bespeaks a meaningful interchange with other people. The intrinsic severity of the autistic process thus appears to be the significant determinant of the outcome. In the absence of speech, the probability of emergence is vanishingly small, apparently without regard to which of the currently available treatment methods is employed. There is, however, no justification for the converse assumption that psychiatric supervision is superfluous and that recovery will necessarily occur when verbal communication is present. The child's subsequent experience will have no less profound an influence on the course of his development in this syndrome than in any other. All of the customary indications for psychiatric guidance will still apply here: therapy for the child, help for the parents, proper choice of school, and so on.

The separation of early infantile autism from other cases of childhood schizophrenia continues to be justified clinically. The early age of onset and the classical early history has already been reported in the literature (3, 4); the low incidence of psychotic progenitors (6) contrasts sharply with the rate reported for childhood schizophrenics (26). To these factors, we can now add the observation that clinically detectable hallucinations or delusions are extremely rare or nonexistent in these patients. The striking disability in interpersonal relations and the severe obsessive-compulsive mechanisms remain the pathognomonic features of autism. The peculiarities of language and thought, while somewhat different, share the general features of schizophrenia, so that the syndrome can be logically classified as one of the schizophrenias (but cf. 15, 22, 27). Its relative specificity, however, does not necessarily imply a common etiology. What we are dealing with is a behavior pattern that is shared by a number of patients but which may represent a response to any one of several underlying inciting factors. In view of the heterogeneity of the schizophrenias, it would seem wise to isolate clinically distinct groups for purposes of study.

Most of the adolescent autistic children who have not emerged from their illness are now functioning at what to all intents and purposes is a severely retarded level, though they remain distinguishable from cases of "simple" retardation by their affective isolation, a point that has already been developed by Mahler (8). It can, of course, be argued that their cognitive potentialities were, from the first, limited. But it would seem inevi-

table that a child whose contact with the human environment is so severely restricted must undergo irreversible intellectual deterioration when opportunities for growth are barred by the exclusion of normal experience, a concept that is supported by animal studies(28-33). Intellectual development can occur only in the most limited sense in the absence of language. The evolution of thought runs *pari passu* with the incorporation of the viewpoints of others, as the child assimilates his cultural heritage and substitutes consensual logic for the egocentric logic of his private world(34). The tenuous nature of the relationship of the autistic child to those about him constricts and distorts this process.

Severely autistic children exhibit a preoccupation with the sensory impressions stemming from the world about them, but seem unable to organize perceptions into functional patterns. A small change in the positioning of what to another observer would appear to be a randomly arranged group of toys may be at once apparent to them, but the use of a doll or toy car and its homology to people or automobiles may escape them entirely. At one level this is reminiscent of the behavior of brain-damaged children(35) but certain important qualitative differences exist. The disability of the brain-damaged child resides at a perceptual level, but once the "gestalt is closed," classification is made on the basis of function. Indeed, one of the difficulties apparent in sorting tests is the very tendency of such a child to see things as similar if they are functionally associated (36). The autistic child, on the other hand, may solve relatively difficult abstract tasks but the use of objects is not grasped(37). The jig-saw puzzle is assembled by the shape of its parts, but without respect to its content. At a higher level of function, a similar disability may be observed. The child may acquire a large vocabulary, but with little or no intent to communicate meaning(38, 39). He may memorize astronomical charts or maps of street car systems, but with no interest in principles or practice of astronomy or transportation. The guiding principle of purpose is lacking, recalling Bleuler's concept of the disorders of association in schizophrenia: "Only the goal-directed concept can wield the links of the associative chain into logical thought"(40).

In those patients with a relatively favorable outcome, behavior is still characterized by a failure to subordinate individual concerns to social necessity. There appears to be little ability to empathize with the feelings of others. The successful patients seem to have acquired, painfully, the ability to simulate the behavior spontaneously exhibited by their peers. One recalls Donald T., who, called upon to speak as a student leader at a football rally, stated that the team was going to lose. The ensuing round of boos led him finally to modify his initially correct prediction, but the experience bewildered him. In a similar vein, Jay S. commented "I've never been able to get along with people. I don't like 'diplomacy.' I come out and say what I think." The painful nature of their contact with others leads them to prefer a solitary existence. David G.'s first wish was "to be a forest ranger and live in a cabin alone, far off in the woods"; David W.'s was that "they stop building new houses in our neighborhood for people to move into."

In a sense, the primary psychopathologic mechanism in infantile autism might be described as a disturbance in social perception, analogous to, but more complex than, perceptual difficulties at a sensorimotor level. Affective contact assures in other children the precedence of things human over things inanimate. Thought and behavior are integrated by the driving force of human purpose, both individually and socially determined. It is this force that assigns the affective value to incoming sensory impressions and organizes the perceptual field into a socially meaningful whole. Its dysfunction in autism results in perceptions that are diffuse and stimulus-bound, thinking that is tangential to human goals, and behavior that is maladaptive. There can be no anatomical "locus" for such a disability; it can only be a reflection of the failure of cortical integration of the affective and cognitive components of behavior. One wonders if there may not be, parallel to intellectual inadequacy, a syndrome of affective inadequacy. Just as intellectual inadequacy may be the outcome of structural limitations or of cultural deprivation, so may affective inadequacy reflect or-

ganic dysfunction, affective deprivation, or a combination thereof.

Summary

Sixty-three autistic children have been re-evaluated at a mean age of 15 years after a mean follow-up period of 9 years. Almost one third have achieved at least a moderate social adjustment. The prognosis has been shown to vary significantly with the presence of useful speech at the age of 5, taken as an index of the severity of autistic isolation. Half of those who possessed meaningful language by the age of 5 improved, whereas only 1 of 31 without the ability to communicate verbally by that age has shown significant improvement. The clinical course of these children justifies the segregation of early infantile autism as a clinical entity, probably to be included within the group of schizophrenias. The psychopathology of autism has been reviewed and the suggestion offered that the fundamental feature is a disturbance in social perception.

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PREGNANCY EXPERIENCE AND THE DEVELOPMENT OF BEHAVIOR DISORDER IN CHILDREN[1,2]

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In clinical practice we have repeatedly noted behavior disorders in children whose symptomatology was suggestive of primarily organic etiology. Further inquiry including history of possible brain injury, and investigation of neurologic, psychologic, and electroencephalographic functioning frequently offers additional contributory evidence toward a diagnosis of organic involvement(1). Some of these children exhibit the paradoxical sedative effect with the amphetamines and, more recently, the even more dramatic response to chlorpromazine and reserpine. However, our clinical impressions are open to all the possibilities of error found in all retrospective examinations. They have become so entangled with emotional and psychologic factors that we have enormous difficulty separating primary and secondary variables and, as in all clinical surveys where no precise diagnostic tool is available, we must remain uncertain as to etiology and diagnosis.

Recently we were led to an epidemiologic examination of the hypothesis that injury to the brain sufficient to be etiologic in childhood behavior disorder occurs during the prenatal and paranatal periods of life. It was noted that complications of pregnancy and delivery as well as prematurity were associated with brain injury resulting in fetal and neonatal death.(2). It was postulated that there ought to remain a residue of children who were not killed by their traumatic experiences but survived to develop various sequelae of brain injury. It was felt that a number of neuropsychiatric disorders might develop depending upon the severity, type, and localization of damage. This continuum of reproductive casualty extending from death might descend in severity through cerebral palsy, epilepsy, mental deficiency, and perhaps even to behavior disorder. In a series of studies we have in fact shown that a relationship between complications of pregnancy and prematurity and the presence of these neuropsychiatric disorders does exist. This report presents some of our findings pertaining to the childhood behavior disorders.

METHOD OF STUDY

Our method, which has been described more fully elsewhere(3) consisted of securing from the Division of Special Services of the Baltimore Department of Education the names and identifying information for all persons born in Baltimore after 1939 with behavior disturbances and referred to them. Clinical data was also secured including intelligence test score and type of disorder. For controls we selected alphabetically where possible the next child of the same sex from the same class[6]. This automatically also matched them for race and age. It was also expected that they would be matched for socioeconomic status since they came from similar areas. This was tested by obtaining census tract of residence at time of birth. This information, which permitted grouping into economic categories, revealed that the distribution of cases and their matched con-

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[6] Because of difficulty in obtaining all classroom records it was not possible to secure a control for each case. Elimination of those cases without controls made no significant difference in the distribution of the variables under study.

TABLE 1

PERCENTAGE OF SPECIFIC COMPLICATIONS OF PREGNANCY AMONG MOTHERS OF CHILDREN WITH BEHAVIOR DISORDER AND MOTHERS OF THEIR MATCHED CONTROLS BY RACE

Maternal complications	White		Non-white	
	Cases (363)	Controls (362)	Cases (108)	Controls (97)
Toxemias of pregnancy	12.0	5.2	27.8	19.7
Bleeding during pregnancy and labor (cause not specified)	5.8	4.6	6.5	7.2
Non-puerperal complications *	5.9	4.2	33.4	23.8
Breech presentation	3.0	4.6	1.9	2.1
Dystocia owing to abnormal pelvis	5.0	3.9	17.6	12.4
Miscellaneous puerperal complications †	2.2	1.9	2.8	1.1
Premature separation of placenta	1.4	.7	1.9	1.1
Dystocia other than owing to abnormal pelvis	.8	.7	—	1.1
Placenta praevia	.6	.3	.9	0
Prolapse of cord and other cord anormalies	2.2	3.4	.9	1.1
Malpresentations other than breech	1.1	.7	0	1.1

* Non-puerperal complications include diseases associated with but not related to pregnancy.
† Miscellaneous puerperal complications include pyelitis, other genitourinary diseases and hydramnios.

trols was essentially similar with regard to socioeconomic status.

The Baltimore City birth register was searched for the birth certificates of these children and the following information secured: place of birth (home delivery or name of hospital), maternal age, number of previous pregnancies, sibling deaths, and stillbirths. For those cases and controls born in hospitals the following information concerning the mother's pregnancy and delivery was abstracted from the hospital record: number of previous pregnancies, abortions, stillbirths, prematures, and neonatal deaths, length of labor, complications of pregnancy and labor, operative procedures, birth weight, and condition of child during the neonatal period. In some hospital records data were not complete, so that for some specific items the groups vary slightly in size.

FINDINGS

One thousand, one hundred fifty-one cases and 902 controls born in Baltimore were found and studied; 30% were non-white, approximating the percentage of non-white children in the public school system. Approximately 75% of the white and 60% of the non-white births took place in hospitals.

Since, as stated previously, we had found an association between mental retardation and pregnancy experience(4), we thought it necessary to examine the data on children who did not have this abnormality. This report is confined to our findings in children with I.Q.'s above 79. Distribution of I.Q.'s over 79 in cases and controls is not significantly different so that intelligence as a variable is eliminated.

A comparison of the distribution of the various complications of pregnancy and parturition that had occurred among mothers of the behavior problem cases and the matched controls of both races is presented in Table 1. In view of the fact that many mothers have more than one complication, a frequency distribution of children according to the number of maternal complications is presented for these groups in Table 2. From these comparisons we note that for the white cases the percentage of mothers with one or more complications is 33.3%, as compared with 25.2% for the controls, a difference that

TABLE 2

PERCENTAGE OF FREQUENCY OF MATERNAL COMPLICATIONS AMONG MOTHERS OF CHILDREN WITH BEHAVIOR DISORDERS AND MOTHERS OF THEIR MATCHED CONTROLS BY RACE

Number of maternal complications	White		Non-white	
	Cases (363)	Controls (362)	Cases (108)	Controls (97)
1	25.9	21.4	37.9	31.9
2	6.3	2.3	20.4	16.5
3	1.1	1.5	5.3	2.1
Percentage having one or more complications	33.3	25.2	63.8	50.5
Percentage having two or more complications	7.4	3.8	25.9	18.5

is statistically significant. (In this report differences will be considered significant at a probability level of .05). In the non-white group 63.8% of mothers had one or more complications as compared with 50.5% of mothers of controls. This difference is also significant. Significantly more of the cases had been exposed to multiple maternal complications than had their controls in both races. In viewing the specific types of maternal complications in Table 1, we note that those that appear to be more highly associated with behavior disorder are those nonmechanical difficulties such as toxemias and hypertensions of pregnancy. These are more prone to produce fetal anoxia than the mechanical difficulties of delivery such as dystocia and serious operative intervention. This is similar to our findings in cerebral palsy, epilepsy, and mental deficiency. Indeed, Table 3 indicates that not only are there no significant differences between cases and controls but there is, if anything, a trend toward more operative procedures in the controls.

In view of the previously observed relationships of prematurity with the other neuropsychiatric disorders studied and because of the clinical observation that premature infants are more susceptible to anoxia, a comparison of the prevalence of prematurity among the cases of behavior disorder with the controls was made. Since complications of pregnancy are associated with prematurity, it was necessary to make this comparison according to the presence or absence of complications. The results are presented in Table 4. The percentage of prematurity is significantly greater among the cases of both races than among the controls and remains greater even when those cases having maternal complications were withdrawn.

TABLE 3

PERCENTAGE OF SERIOUS OPERATIVE PROCEDURES AT TIME OF DELIVERY AMONG MOTHERS OF CHILDREN WITH BEHAVIOR DISORDERS AND MOTHERS OF THEIR MATCHED CONTROLS BY RACE

Operative procedures at time of delivery (excluding low forceps)	White		Non-white	
	Cases (363)	Controls (262)	Cases (108)	Controls (97)
Mid forceps	0.8	1.2	0.9	1.1
High forceps	0	.3	0	0
Caesarian section ...	2.5	1.2	1.9	2.1
Breech extraction ..	2.5	4.6	1.9	2.1
Internal version and extraction	0	.3	0	0
Total operative procedures ...	5.8	7.6	4.7	5.3

TABLE 4

PERCENTAGE OF PREMATURE BIRTHS (BIRTH WEIGHT BELOW 2,500 GM.) AMONG CASES WITH BEHAVIOR DISORDER AND CONTROLS ACCORDING TO PRESENCE OF MATERNAL COMPLICATIONS OF PREGNANCY AND PARTURITION BY RACE

	Maternal complications present	Maternal complications absent	Total prematurity
White behavior disorder children (363)	3.3	2.8	6.1
White control children (262)	1.5	.8	2.3
Non-white behavior disorder children (108)...	11.2	5.5	16.7
Non-white control children (97)	4.2	1.0	5.2

Like prematurity, abnormal status during the neonatal period, including signs of severe anoxia and seizures, is associated with complications of pregnancy and also with prematurity itself. We therefore summarized the prenatal and paranatal factors present by taking into account the overlapping that occurs between these conditions. Thus, we consider 3 groups: those children who were exposed to one or more complications, prematurity without maternal complications, and neonatal abnormalities without either maternal complications or prematurity. In this way, we obtain an estimate of the total frequency of abnormal prenatal and paranatal factors in each of our groups (see Table 5). In our white group, 39% of behavior problem children have been exposed to one or more of these abnormalities as compared with 31% in the controls. In the non-white cases 73% have been thus exposed as contrasted with 54% in their matched controls. The differences in both racial groups are statistically significant.

COMMENTS

The results appear to indicate that there exists a relationship between certain abnormal conditions associated with childbearing and the subsequent development of behavior disorder in the offspring. A number of additional findings tend to confirm this

TABLE 5

PERCENTAGE OF FREQUENCY OF VARIOUS ABNORMALITIES OF PRENATAL AND PARANATAL PERIODS AMONG BEHAVIOR DISORDERS AND CONTROL BIRTHS BY RACE

	White		Non-white	
	Cases (363)	Controls (262)	Cases (108)	Controls (97)
Total with one or more maternal complications of pregnancy	33.3	25.2	63.8	50.5
Total premature births without maternal complications	2.8	.8	5.5	1.0
Total with abnormal condition during neonatal period without prematurity or maternal complications	2.8	5.0	3.7	2.1
Total with abnormalities of prenatal and paranatal periods	38.8	30.9	73.0	53.6

impression but can be presented only briefly here.

Since we were aware that our experimental group was diluted with a large number of children who were not behavior problems *per se* but rather neglected children, and truants on a sociocultural basis, we analyzed the data on the children classified as confused, disorganized, and hyperactive, a category previously described as possibly brain injured. Approximately 40% fell into this category, a large proportion of them males, the sex apparently more frequently brain injured. Here the differences between cases and controls are even greater.

In the group of children with I.Q.'s below 80, differences between cases and controls are greatest, as might have been predicted.

An interesting comparison between cases and controls was made in the Eastern Health District of Baltimore, where extensive family data were available. There are no differences as to number of broken homes, parental education, parental age, number of families per household, number employed, number of persons per room, or mean rent. The only significant difference found is that the fathers of the controls were more often foreign born. Even this may not be of much meaning, since if a fairly large number of comparisons are made, one of them could be expected to be found statistically significant by chance alone.

The implications of these findings seem rather obvious. First, it is apparent that abnormalities of childbearing are not the cause of all behavior disorders of childhood. There are enough factors on the cultural, social, and psychologic levels of integration to cause disorganization sufficient to produce behavior disorder in probably the majority of instances. However, at the same time, we must not forget the postnatal organic traumata, such as malnutrition, infection, anoxia, toxemia, and hemorrhage. These latter, like the pre- and paranatal factors, may result in sufficient cerebral dysfunction to lower thresholds to sociocultural and psychologic stress which may then result in disorganization in functioning on these levels with the establishment, in this fashion, of a vicious spiral of malfunction on all levels.

Secondly, while doubtlessly an association exists between certain childbearing abnormalities and behavior disorder, this relationship is not of necessity an etiologic one. There are distinct limitations to the inferences that can be drawn from this type of epidemiologic study which can only point to the form and direction further studies should take(5). The pattern of factors such as complications of pregnancy, prematurity, and neonatal abnormalities that appear to be associated with behavior disorder is similar to that previously found to be associated with stillbirths, neonatal deaths, cerebral palsy(6), epilepsy(7, 8) and mental deficiency. It has been postulated that there exists a continuum of reproductive casualty composed of a lethal component and a sublethal component consisting of these neuropsychiatric disorders(9). The results of this study suggest that this sublethal component should also include behavior disorder. The results are sufficiently suggestive to warrant the continuance of similar studies concerning other possible components of this continuum. They also warrant giving

serious consideration to the possibilities of establishing concurrent studies in which a group of infants classified by these maternal and fetal abnormalities could be followed so that one can actually measure the risks of developing various neuropsychiatric conditions associated with the abnormalities. We(10) are now in the fourth year of such a study, in which the effects of prematurity on growth, development, and the evolution of sequellae to brain injury are being studied in a group of 500 prematurely born infants and the same number of full-term matched controls. Developmental examination of all these children at 40 weeks of age reveals significant differences between prematures and controls as far as gross abnormalities are concerned, particularly cerebral palsy, chiefly in the lower weight groups. However, it is in the syndrome of what we term minimal cerebral injury that we are most interested(11). This is a condition detectable by retardations and distortions of normal behavior patterns in the infant which gradually disappear leaving equivocal, or no, neurologic findings; it may well prove to be a precursor to the behavior disorders as described above. We have found as many as 10% of full-term infants presenting this syndrome and the percentage is approximately doubled amongst the prematures.

It is evident from these and similar observations referred to in this report that the hypothesis of the continuum of reproductive casualty provides a conceptual framework for further investigation. We are no longer quite justified in speaking of cerebral palsy, epilepsy, mental deficiency, and childhood behavior disorder as distinct and separable clinical entities but must rather think in terms of chronic cerebral injury with cerebral palsy and/or convulsive seizures, mental retardation, behavior disorder. This focuses attention not only on the need for care in diagnosis but also, since it is now well known that brain-injured individuals require specific types of management and education, on the fact that a good deal of effort needs to be exerted toward the development of precise methods of diagnosis.

Above all, this conceptual framework indicates an area within which lies the possibility of prevention of some of these neuropsychiatric disorders. It indicates the need for extensive studies of the factors causative to or associated with the complications of pregnancy and labor, since these not only influence maternal health and infant loss but appear to have an influence on the surviving infant. Any effort toward the prevention of the components of this continuum must of necessity be directed at an improvement of conditions associated with maternal health.

Summary

The prenatal and paranatal records of children with behavior disorders born in Baltimore after 1939 show significantly more complications of pregnancy and delivery, and prematurity than their matched controls. The non-mechanical abnormalities such as toxemia appear to be the important factors in this association rather than the mechanical factors of delivery. These associations are still present even when intellectual and environmental factors are controlled. Hyperactive, confused, and disorganized children have even more of these abnormalities in their background.

A hypothesis of a continuum of reproductive casualty is formulated consisting of brain damage incurred during these periods leading to a gradient of injury extending from fetal and neonatal death through cerebral palsy, epilepsy, mental deficiency, and behavior disorder. The implications of this continuum are discussed with regard to further research in the etiology, diagnosis, management, and prevention of these neuropsychiatric disorders.

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EVALUATION OF COMBINED CORAMINE-ELECTROSHOCK THERAPY IN THE TREATMENT OF SCHIZOPHRENIA

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THE PROBLEM

For the past few years a number of variations in standard electroshock therapy have been proposed and experimented with. The purpose of this study is to determine whether or not the results of EST may be improved by the use of coramine (diethylamide of nicotinic acid). Few studies on this are found in the literature, Fabing's(4, 5) being the first published account of coramine-EST and the most outstanding. In the treatment of 100 consecutive hospitalized patients he found that the average treatment given per case when using 5 c.c. I.V. coramine plus EST was 7.5 with a range of 2-22 treatments. This may be contrasted with Alexander's(1) report on EST used on 36 schizophrenics with an average of 12.3 treatments and Kalinowski and Worthing's(6) study on 200 schizophrenics in which 20 convulsions were considered as the minimum number of treatments necessary. Various other figures are given by Bellak(3, pp. 299-302) with 12-20 appearing frequently. The only ill effect found by Fabing(5) was a thrombosis in the arm caused by the injection in 10% of the patients, but this could be remedied by using an equal volume of sterile distilled water with the coramine.

PROCEDURE

Thirteen female schizophrenic patients (Group A) from among consecutive new admissions were given EST in conjunction with 5 c.c. coramine injected intravenously. The following 13 consecutive female schizophrenics admitted (Group B) were given 5 c.c. saline solution intravenously in conjunction with their EST treatments. Saline was used in the control group in order to equalize the factor of "attention," since patients on EST receiving "injections" feel that they are receiving special treatment of some sort and this may favorably affect their progress. An exception to the consecutiveness occurred when 2 sisters were committed about the same time—one received coramine, the other saline. All were first admissions with the exception of 2 patients—1 in each of the experimental groups. Diagnosis was based on a combination of psychiatric and psychologic findings, and although these did not always entirely agree, the diagnostic problem cases were found equally distributed between the 2 groups, both of which were composed mostly of paranoid, schizo-affective, and acute undifferentiated schizophrenics. The onset of illness prior to hospitalization, as determined from social service records, was 11 weeks and 12.5 weeks for Group A and B respectively. Economic and marital status for the 2 groups was comparable.

Treatment was maintained until a satisfactory clinical result was obtained or when no further benefit from treatment was apparent, as is the procedure with standard EST treatment. The staff members who made this decision had no knowledge as to which experimental group the patients belonged, nor was any influence exerted by the authors of this article.

Prior to their series of EST, these 2 groups were given a Wechsler-Bellevue, Form I, intelligence test and a Bender-Gestalt test, as part of their regular psychological battery. They were retested 5 weeks after their final shock treatment to determine the relative effects of the different treatments, if any existed. Although they were not matched in pairs, Table 1 shows that the 2 groups were roughly similar.

TABLE 1

THE MEAN AGE, INTELLIGENCE, AND BENDER "Z" SCORES OF THE TWO EXPERIMENTAL GROUPS PRIOR TO TREATMENT

	Group A (EST and coramine)		Group B (EST and saline)	
	Mean	Range	Mean	Range
Age	36.3	(19-57)	40.2	(27-59)
Pre-shock I.Q.	88.5	(50-122)	98.5	(69-111)
Pre-shock Bender "Z" score	85.3	(54-142)	80.9	(47-177)

[1] Respectively, senior physician, Female Service, and members of psychology department, Augusta State Hospital.

Matched pairs were not feasible as a limited admission rate prevented this more acceptable procedure. An attempt was made to prove that the 2 groups differed significantly prior to treatment as to age, I.Q., and Bender "Z" score. This could not be proven statistically as, when the critical ratios for the differences were computed, the Null Hypothesis (which states that the true difference is zero) was not rejected, the differences existing before treatment being no greater than chance expectancy. With only 13 subjects in each group, the distribution for intelligence and Bender "Z" scores were skewed somewhat. Therefore, it cannot be positively stated that the 2 groups were completely comparable before treatment; however, for practical purposes, they may be considered reasonably so.

Pascal and Suttell's(7) scoring of the Bender-Gestalt test was used—the Bender-Gestalt being generally a test of how well an individual perceives structured reality situations. The greater the misrepresentation of the designs, the higher the "Z" score. A "Z" score of 72 or above nearly always indicates pathology, while those between 50 and 72 are suspect. Prognosis has been found to be better for patients with a low-scoring record (7, 36). An improvement in clinical appearance did not always show up as an improvement in the Bender "Z" score, since the test often reveals difficulties which may be masked behaviorally. Also, a high score is not always indicative of severe pathology as anxiety and motivation may affect performance. Intelligence is usually considerably impaired by psychosis and improves or reaches near-capacity when a good remission is obtained; thus our interest in the I.Q. before and after treatment.

Five weeks after the last treatment, statistically significant differences between the two groups were found. Of particular interest is the number of shock treatments required for patients in Group A as contrasted with those in Group B. Group A (EST and coramine) received an average of 7.5 treatments, with a range of from 3-15. Group B (EST and saline) required an average of 12.5 treatments with a range of from 4-27. The difference between the means was found to be statistically significant with the Null Hypothesis being rejected at the 1% level of confidence. Statistically this indicates that the difference between the 2 means is significant (too large to be attributed to chance or sampling error alone). The probability that this difference did occur by chance is 1 in 100. Post-test differences between improvement in intellectual functioning were also significant at the 1% level, Group A showing greater improvement. Both groups showed greater improvement in the performance area than in the verbal area. This might be expected as the performance scores tend to be lowered considerably in schizophrenia. Block Design and Digit Symbol proved to be the most sensitive to psychosis and improved the most after treatment. In the verbal area, arithmetic showed the most improvement. The post-test Bender "Z" scores were 56.1 for Group A and 80.6 for Group B, the difference being significant at the .1% level. From a statistical standpoint this greatly reduces the possibility that such differences could have occurred by chance—thus the conclusion that coramine is the responsible variable. The results as to average number of treatments required, Wechsler-Bellevue I.Q. increase, and Bender "Z" score improvement are presented in Table 2. Figure 1 more adequately illustrates the differences between the 2 groups after their respective treatments.

Two months following their last treatment 6 patients in Group A were on trial visit and 2 others were discharged. Six patients in Group B were on trial visit at this time. Definite failures were seen in 4 patients in Group B who were subsequently given insulin coma therapy. Only 2 in Group A showed no significant clinical improvement and were given insulin. The administration of intravenous coramine closely followed the procedure reported by Fabing(4) with very

TABLE 2

THE MEAN NUMBER OF TREATMENTS REQUIRED IN THE TWO EXPERIMENTAL GROUPS AND THEIR IMPROVEMENT IN INTELLECTUAL FUNCTIONING AND REALITY TESTING AFTER TREATMENT

	Group A	Group B	C.R.	df	P
Treatments ..	7.5	12.5	2.92	24	>.01
I.Q. increase..	15.8	4.0	3.38	24	>.01
Bender "Z" score improvement .	29.2	.3	3.80	24	>.001

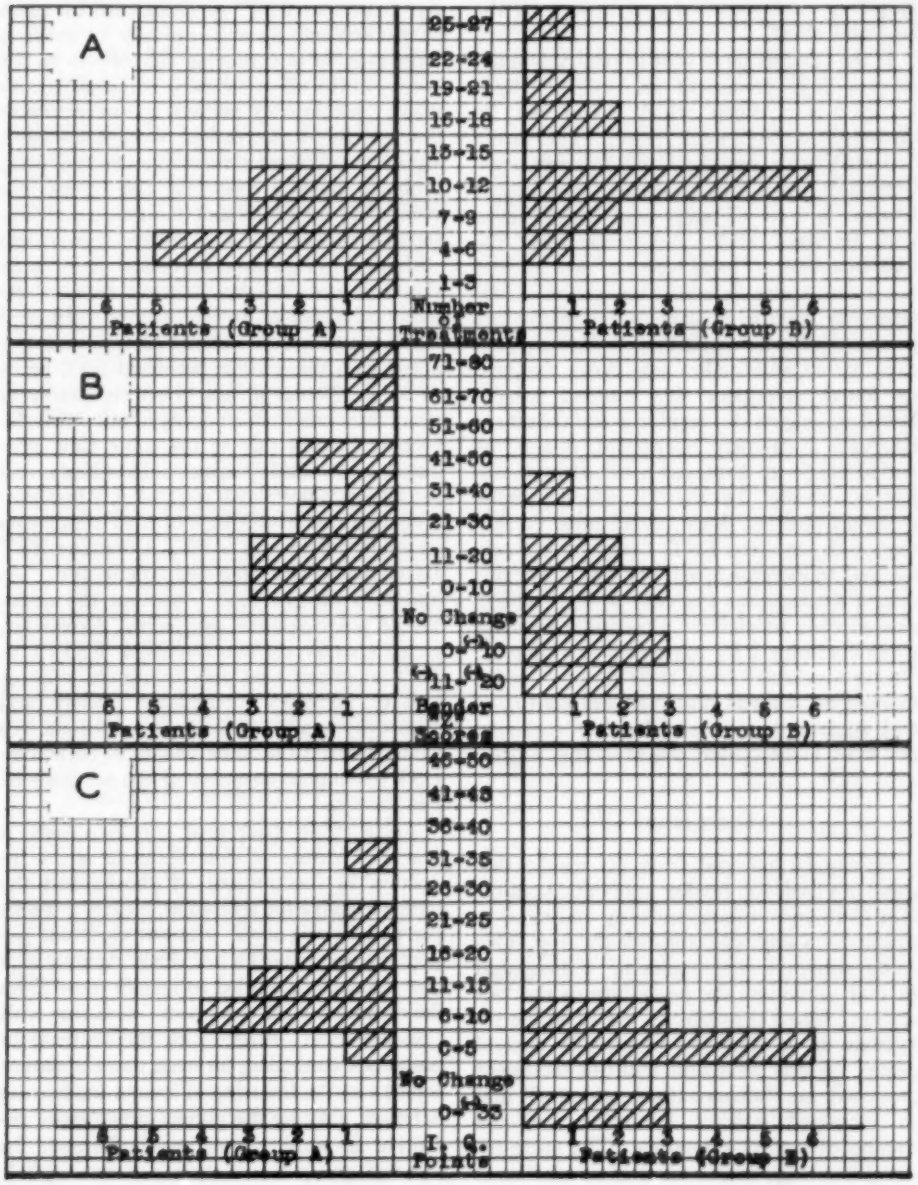

FIG. 1

A. Number of treatments required for patients in Groups A and B.
B. Change in Bender-Gestalt "Z" scores after treatment.
C. Change in Wechsler-Bellevue I. Q. scores after treatment.

similar results, with the usual increase and deepening of respiration and flushing of the face and chest.

If the patients were kept in relatively quiet surroundings, treatment was followed by a 1- to 2-hour sleep which could not be distinguished from natural sleep. This rarely occurred with standard EST treatments. Generally, upon first awakening, the patient reached a level of awareness greater than with standard EST. Frequently after the first treatment a "lucid interval" was noticed for a few hours in which the patient spontaneously tried to explain or rationalize her previous behavior and asked for information, explanation, and further help. After the third or fourth treatment this interval usually lasted as long as the regular 2-day treatment interval. Extremely overactive, hostile, or autistic patients displayed a surprisingly objective attitude. Previously excited patients generally quieted down, even more quickly than with standard EST. Catatonic patients showed an increase in activity, and suspicious ones a spontaneous tendency toward repression of their suspicions. Practically all those given coramine-EST expressed gratitude for "being awakened from their illness," and a marked decrease in posttreatment confusion and anxiety was noted. Neither coramine nor EST alone caused effects of this degree.

Discussion

It may be inferred from the results that there is a basis for further study and application of this procedure, utilizing coramine in conjunction with electroshock therapy. This study supports the results of Fabing and further minimizes the possibility of the "attention" factor through the use of saline injections in a roughly comparable control group. Fabing postulated that this treatment produced an "ultramaximal stimulus" and so increased cortical inhibition and the waning of mental symptoms. The more recent knowledge of the effect of the thalamus as a regulating and "pace-making" center versus the cerebral cortex, as the awareness and integration apparatus, provides a more promising line of explanation. Because of topographical factors, in order to stimulate the thalamus, we have to pass through the cortex with the full current. With "intensive-treatment EST" recommended for cases of excitement, there is no way to avoid a large number of confusing side-effects on the cortex in the effort to reach sufficient stimulation (presumably enough to cause inhibition) of the diencephalon. Coramine causes an increased blood flow in the cerebral area, probably thereby rendering the cortex less vulnerable for functional disruption and subsequent confusion. The cortex then reacts with a temporary total inhibition of its function and probably the thalamus receives the intended stimulus. In reference to intensified EST treatment Alexander(2, pp. 212-13) noted with manics that standard EST tends to be ineffectual unless given repeatedly at short intervals to thoroughly break down defenses; though this at the same time produces undesirable organic side-effects and considerable postshock confusion. Alexander feels that this overdosage of EST represents an unphysiologic use of EST. Coramine-EST accomplished the same desired effects of "intensive-treatment EST" without the undesirable posttreatment symptoms. Alexander, in his chapter on nonconvulsive EST(2, p. 227) mentions that this treatment relieves anxiety, increases spontaneous activity, and restores awareness of memory conditions. We have observed the same results in coramine-EST patients irrespective of the accuracy of our theory.

Aside from theoretical considerations, a practical feature of this treatment is the reduction in the number of shocks and the time necessary for remission. Nearly 2 weeks per patient was saved with our coramine patients using 3 shocks per week. Acutely sick new admissions tended to benefit most from the coramine-EST treatment—as is true with standard EST. Along with the decrease in postshock confusion, an even more apparent aspect was the lowering of former inadequate defenses, making the patient much more receptive to simultaneous psychotherapy. In our test group this feature was not capitalized upon in order not to contaminate the experimental variable, coramine. This observation was made from work with a number of patients receiving coramine-EST in the year preceding this study. It was also found that alternating coramine-EST with

standard EST treatments in the same patient had an undesirable effect.

In institutional EST, an unfavorable factor is the belief that EST is a painful punishment and is feared by most patients. Although the coramine-EST patients were not segregated, their fears were negligible and many did not realize that they were getting "shock" treatments, but believed they were only receiving injections. This belief persisted in some even after termination of their treatments series. "Shock" treatments and "shot" treatments (both Group A and B) were differentiated by many patients in ward discussions. Some backward chronic schizophrenic patients were also given coramine-EST but no particular lasting effect, superior to standard EST, was found.

Summary and Conclusions

1. Thirteen schizophrenic female patients from among consecutive new admissions were given 5 c.c. coramine in conjunction with their regular series of EST, and a roughly comparable group of 13 patients received saline injections with their EST.

2. These patients were given the Wechsler-Bellevue Intelligence Scale and the Bender-Gestalt test just prior to their shock series and were retested 5 weeks following their last treatment.

3. Results indicate that EST used in conjunction with coramine significantly decreased the time spent in EST treatment. Patients receiving coramine returned to a higher level of intellectual functioning and more adequately perceived reality than did their controls as measured by psychological tests.

4. It is hypothesized that coramine-EST brings about an increased blood flow and thalamic stimulation occurs with most of the results being similar in quality, but greater in quantity, to those with standard EST. The one major qualitative difference noted in contrast with standard EST treatment was the lowering of inadequate defenses. The use of coramine-EST makes "intensive-treatment EST" for excited patients unnecessary, thereby avoiding the undesirable post treatment confusion and clinical organic symptoms.

5. Coramine-EST patients experience less fear and appear more receptive to psychotherapy. Acutely ill new admissions benefit most.

6. This is a pilot study and the results should be considered tentative in view of the size of our sample. A 2-year follow-up of these patients would be necessary to draw any definite conclusions as to the permanency of the effects of coramine-EST. The marked tendency in favor of the coramine-EST group does, however, warrant further investigation of coramine as a variation in EST.

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SUDDEN DEATH AFTER ELECTRIC SHOCK TREATMENT DUE TO TRACHEAL AND BRONCHIAL OBSTRUCTION[1]

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Although the popularity of convulsive therapies, especially of electroshock treatment, has for the past several years seemed to be waning, both insulin and electroshock remain two of the main standbys for the practicing psychiatrist. Although psychotherapy with schizophrenic patients has lately become more encouraging, there remain, nevertheless, cases where one returns to the convulsive therapies.

Fatalities during and after electroshock remain extremely low. However, it is the impression of such authors as Kalinowsky and Hoch(1) that a certain number of fatalities occurring in private work are not being properly reported. Kalinowsky reported in 1949 on 10 years' experience with EST applied to many thousands of patients without fatalities. Kolb and Vogel(1), in their survey of all American hospitals, found the death rate of 0.06% for electroshock treatments, compared with 0.6% for insulin. Impastato and Almansi found 0.8% in their survey of the literature on electroshock. Kalinowsky stresses that it is regrettable that in many reports the circumstances of the death are poorly described.

Authors working extensively on electroshock fatalities agree that autopsy findings are usually meager and that brain pathology has rarely explained the deaths. Most of the fatalities reported give evidence of being cardiovascular in origin. Will, Rehfeldt, and Neumann(2) have summarized the 33 deaths following electroconvulsive therapy reported in the American and English literature prior to 1949. Nine of these occurred within one hour of treatment. In 2, recent coronary occlusion and myocardial infarction were found at autopsy. Death occurred in the first case(3) 90 minutes after the twelfth grand mal seizure. Autopsy revealed a thrombosis of the descending branch of the left coronary artery and an area of recent infarction in the anterior cardiac wall. The second case(4) died about 12 minutes after the eighth treatment, without recovering consciousness. Autopsy showed extensive obliterating coronary arteriosclerosis and a 2- to 3-week-old infarction of the posterior wall of the left ventricle.

Reports of immediate cardiovascular fatalities associated with EST since 1949 are few. In 1950 Eyman and Morris(5) reported two cases: a 34-year-old male with known mitral stenosis and cardiac decompensation, who died immediately following the sixth treatment, and a man of 54 years, with a borderline normal electrocardiogram, who died suddenly 40 minutes after the fifth treatment. Occlusion of both coronary arteries, but no evidence of recent infarction was found at autopsy. Raskin and Johnson(6) reported a case with symptoms of acute cerebellar damage. Death occurred 3½ hours later. Autopsy revealed an acute cerebellar hemorrhage.

In a recent paper, Sisler and Wilt(7) report 2 more cases of immediate fatal coronary thrombosis following ECT. Their first case, a 50-year-old, white, male farmer, who was suffering from involutional psychosis, died after the first treatment. At autopsy, the left coronary artery was markedly arteriosclerotic throughout and the anterior descending branch of the right main coronary had a similar occlusion. No lesions were seen in the brain substance. An old myocardial infarction, however, was present. The second case was a 60-year-old, white, male office worker, who died following his first outpatient treatment. He had suffered from a manic-depressive illness, characterized by severe recurrent depression. At autopsy, the left coronary artery and branches showed marked arteriosclerosis with extensive calci-

[1] Presented before the 114th annual meeting of the Illinois State Medical Society, Chicago, May 18, 1954.

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fication. The left circumflex branch was completely occluded by a soft, red thrombus. The myocardium showed patchy areas of fibrosis, but no evidence of recent infarction. The brain was free of pathology.

Rogg(8) reports a case of a 50-year-old female who died 50 minutes after receiving her second shock treatment. An obese patient, she had large superficial ulcers over both legs, with varicose veins. Autopsy showed a left pulmonary embolus, the diameter of a pencil and 2 inches long, which was given as the cause of death.

Martt and Spikes(9) report a fatality caused by extensive aspiration bronchopneumonia with multiple lung abscesses.

While most electroshock fatalities, with exception of the last-mentioned, are due to pathology of the cardiovascular system, a sudden death, likewise due to a pulmonary complication during EST, was recently observed at Elgin State Hospital, in all possibility caused by obstruction of the trachea and bronchi, with the heart and brain completely intact at autopsy.

C. W., was admitted to the Veterans Unit of Elgin State Hospital on November 7, 1953. He was a 34-year-old colored male about whose past and recent history little material was available. Seemingly, he was a metal pourer in one of the steel mills near the South Side of Chicago. He was extremely suspicious of the social worker who interrogated him, and soon after the beginning of the interview answered all questions with monosyllables, in a negative way. He did say that he was a veteran of World War II. There were vague paranoid ideas; he muttered something about pumping gas on him and how "he couldn't get rid of the gas." As the interview proceeded he yelled at the interviewer that he "just couldn't belch." He emphatically stated that he had not been drinking.

The patient served in the United States Army from October 1939 to September 1945, and was honorably discharged. Other observers found that he had been indulging in alcohol immediately prior to admission and that he was complaining of hearing voices, seeing visions, and expressed various persecutory paranoid ideas, and feared that he was about to be killed.

He was divorced several years ago; his mother had died of tuberculosis. He came from an extremely poor background. Available information indicated that people living around him since his army discharge felt he was under extreme emotional tension.

He was received at the Elgin State Hospital in restraint, was very confused and frightened, but could be contacted in many islands. There was, however, disorientation in all 3 spheres. At times he made threatening remarks. Physical examination on admission was completely negative, and a neurological examination, incompletly performed because of uncooperativeness, revealed no pyramidal signs or indications of intracranial damage. Blood Kahn was negative. His contact was sufficient to give written permission for electroshock treatment, and he received his first EST on November 10, 1953, mainly to relieve his panic state. He recovered from this treatment without any complication, but had to be again restrained. On November 13, 1953, patient received his second shock treatment. At the termination of the convulsion, he merely took one deep breath and then ceased breathing. Respiratory and cardiac stimulants were administered immediately, intracardially, and artificial respiration was instituted but to no avail. No curare had been used during either treatment.

At autopsy by Eric Bock, M. D., pathologist, the findings were as follows:

"External Appearance: The body of a colored young adult male, well built and well nourished. There were no signs of injury. Both pupils were wide, round and equal. There was no blood in the nose, mouth, or ears. No foreign body was found in the throat. Teeth were nearly completely present, but in poor and partially loosened condition.

"Head: The scalp, bone, dura and meninges were of normal appearance. The brain was rather soft, but there was no localized softening, no hemorrhage, and no other pathology. The brain weighed 1,290 grams. Ventricular fluid was clear and yellowish. The shape of the skull had normal appearance.

"Thoracic Cavity: Both lungs were of normal appearance and inflated. There was no fluid in the pleural cavities. The trachea contained much greenish, viscous, pus-like material. The main bronchi and the smaller branches were filled with this matter to a degree that practically represented a complete obstruction. The right lung weighed 325 grams, the left 260 grams. The heart was situated in a normal pericardial sac. On the anterior part of the sac a minor blood extravasation was found, originating from an intracardial injection. No blood was found in the pericardial sac. The heart weighed 325 grams. The left ventricle was firm and contracted, and slightly hypertrophic. The myocardium, valves, and coronary arteries were in perfect condition. There were no thrombi in the heart. No emboli were found in the pulmonary arteries.

"The vertebrae of the neck were palpated and there were no signs of fracture.

"Abdominal Cavity: No fluid was encountered. The peritoneum was shiny. The liver was of normal size and appearance and weighed 1,500 grams. The spleen was small and firm, and weighed 105 grams. Pancreas and adrenals showed no signs of disease. Both kidneys were of somewhat bluish color, but otherwise normal in structure. Each kidney weighed 145 grams. Ureters and urinary bladder were normal. Stomach contained a very small amount of liquid and solid brownish food. The small and large intestines were of normal appearance. Feces contained in the bowels were also normal in appearance.

"Anatomical Diagnosis: (1) Large amount of purulent matter in the trachea and bronchi (microscopic examination of the smear revealed pus cells and pneumococci). (2) Minor blood extravasation in anterior pericardial sac due to injection.

"Cause of Death: Asphyxia due to aspiration of viscous pus-like secretion in the upper airways.

Discussion

From the autopsy it can be concluded that this patient, who had been in restraint permanently, was unable to ventilate his air passages properly and thus had accumulated a large amount of viscous secretion in his airways. When given electroshock the secretion may have reached the narrower lower bronchi and may have increased his dyspnea. Artificial respiration may have had, in this case, an adverse effect because the secretion may have been pumped further down and probably caused a complete obstruction. The cause of death is asphyxia due to the factors described above.

The question arises as to why this patient's cough reflex was paralyzed immediately, so that he was unable to expectorate this material. Thus, a possibility exists that cerebral damage was the primary cause of death and the obstruction of the airways secondary. This, in the absence of gross pathological findings of the brain, remains hypothetical. However, microscopic examination of the brain did not reveal any pathology, which would permit one to postulate that the patient died a cerebral death.

Summary and Conclusion

A case is described of a 34-year-old male who expired suddenly during electroshock treatment. His death was ascribed to congestion of the trachea and main bronchi with viscous pus-like mucous material. In any possibility, his death cannot be ascribed to cardiac or cerebral damage. The case is an addition to the relatively small series of fatalities due to electric shock treatment, a total of only 40 having been described in the American and English literature. Needless to say, care should be taken to have a patient properly ventilate before electric shock treatment, especially after having been in continuous restraint for a considerable length of time.

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THE MENTAL HOSPITALIZATION OF THE AGED: IS IT BEING OVERDONE?[1]

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From 1900 to 1950 the population of the United States doubled, but the number of persons 45 to 65 tripled, while the number 65 and over quadrupled. In 1953 there were 13,325,000 persons 65 years of age and over and the number was increasing at the rate of about 350,000 a year(1). The percentage of the total population of the United States 65 years of age and over increased from 4.0% in 1900 to 8.1% in 1950(2). It is expected to increase to 10.0% by 1970(1). The percentage (1950) varies by states from 4.9 in New Mexico to 10.9 in New Hampshire. Twenty-nine of the states have 8% or more (2).

The increase of the aged in the population has posed problems in various sociologic fields. Psychiatrists and mental hospital authorities are especially concerned. The aged are flowing into mental hospitals in ever-increasing numbers. In some states this is largely responsible for the need for additional mental hospital beds. The increased use of mental hospitals by the aged is not altogether due to the higher incidence of mental disease among them nor to their growing numbers in the population. The number admitted to mental hospitals is increasing much more rapidly than their number in the general population, and it is widely felt and feared that many feeble old people are being sent to mental hospitals for sociologic rather than for mental health reasons.

QUESTIONNAIRE

In order to get a cross section of authoritative opinion on the use and possible abuse of public mental hospitals by aged persons, a questionnaire was sent to 80 outstanding authorities in the mental hospital field. Included among these were officials in charge of mental hospital programs and psychiatrists with broad mental hospital experience. Fifty-four replies were received. A few additional replies were too general to be of value.

Of the 10 questions, 2 dealt with admissions. A tabulation of the replies with comments follows:

Question 1.—What percentage of patients admitted presumably with senile psychosis or psychosis with cerebral arteriosclerosis are not psychotic?

Fifty respondents answered as follows:

None	7
Few or rare	10
Don't know	7
0.5% to 10%	11
10% to 50% (includes one who said a good many)	14
Above 50%	2

Question 2.—What percentage of patients admitted with the above diagnoses have such mild symptoms (forgetfulness, restlessness, mild irritability, etc.) that they might be considered borderline rather than real psychotic problems and could easily be taken care of at home, assuming a home is available, or in the infirm wards of a general hospital?

Forty-eight respondents answered as follows:

None	2
Few or moderate	4
Don't know	10
3% to 10%	8
10% to 50%	18
Above 50%	6

The wide variations in responses to these 2 questions were due more to different viewpoints than to actual differences in the patients admitted in the various states. This conclusion is supported by statements made in the responses and by reports of intensive studies in several states. Some respondents took the attitude that commitment as psychotic settled the question of diagnosis except for an excusable slight margin of error. They naturally found few nonpsychotics. Some who reported large percentages of nonpsychotics obviously included with them those whom they thought should have been sent

[1] Read at the 111th annual meeting of The American Psychiatric Association, Atlantic City, N. J., May 9-13, 1955.

elsewhere because of the mildness of their symptoms.

Some illustrative remarks are: "Approximately 75% may show some senile changes but are not overly psychotic." "About 25% would be mildly senile." "Approximately 25% of those admitted do not turn out to be psychotic."

A survey was made of patients 60 years of age and over admitted in June 1950 to California State hospitals. These patients were intensively studied by competent psychiatrists at the hospitals who placed 35.5% of them in a nonpsychotic group. However, the nonpsychotic group is described as "patients with one or more of the symptoms typical of senility: forgetfulness, confusion, a tendency to wander away, restlessness at night, irritability, overtalkativeness, emotional lability."

A report(4) of a survey made in 1950 of patients 65 years of age and over, resident in 5 state hospitals in another state, says "there was only one case in which commitment did not seem to have been justified." Another report(5) from this state issued in the same year states:

> There is evidence, however, that an ever increasing number of elderly patients are becoming incapacitated and in need of institutional care. In many of these situations there is sufficient mental illness to make it possible under existing laws and concepts, to classify them as mentally ill. However, it is not the mild mental illness which constitutes the real incapacitating problem, but rather physical infirmity.

From the answers to the 2 questions, it is obvious that there is a preponderance of authoritative opinion that public mental hospitals are being burdened by an increasing number of old people who should be cared for elsewhere. In other words, people who become feeble physically, have failing memory or some slight change in personality, and are financially unable to care for themselves are sent to mental hospitals because no relative is willing or able to care for them and there is no other place for them to go. The diagnosis of psychosis in these cases may be technically correct but it is ethically wrong.

The wide variation of admission rates of aged persons to mental hospitals in the States supports clinical observations that other factors than mental disease are responsible for many of the admissions but the differences are not altogether due to misuse of mental hospitals by the aged. The same is true of residence rates. Higher rates may mean in part that one state is providing some kind of shelter for types of distressed people that another state neglects.

From 1903, the earliest year for which reasonably comparable data are available, to 1950, the resident patients in state mental hospitals in the United States increased from 1.9 to 3.5 per 1,000 population(6). There is no positive evidence that there was an increase in the prevalence of mental disease during this period.

Various factors(3) other than the actual prevalence rates influence mental hospital admission and residence rates. Perhaps the most important factor is the availability of beds. As the number of beds increase more people use them. The generally accepted needed ratio of beds is 5 per 1,000 population. Two states (1953) maintain this ratio in their public mental hospitals. In one very sparsely settled state the ratio is only 1.5 per 1,000(7). States that have a relatively low admission rate may have a high residency rate and vise versa. In some places patients are admitted in large numbers because of pressure and discharged quickly because of necessity to make room for others.

Because of relatively greater complexity of life in cities than in country districts more people are admitted to mental hospitals from cities, but there are exceptions(8). Los Angeles, which in popular fancy harbors so many peculiar, abnormal people, has an admission rate one-half that of San Francisco and considerably less than the California rate as a whole. From another large city (population 2,000,000), the admission rate to state mental hospital for several years has been about one-half the state admission rate. There are reasons for these differences totally unrelated to the prevalence of mental disease (3).

THE OLD AGE FACTOR

The old age factor is of major importance, but the higher incidence of mental disease in the aged is not solely responsible for their increased use of mental hospitals.

Old age is closely related to other factors that influence mental hospital admission rates.

Increased urbanization, smaller homes, smaller families, more members of the family working away from home, and greater public confidence in mental hospitals apparently have had much more effect on the admission of the aged than on the admission of the young. The feeble aged in our complex environment are more difficult to manage than they used to be, and the general attitude toward them has changed, so that people easily convince themselves that institutional life is the proper thing for their feeble, old relatives. As mental hospitals offer less resistance than other outlets, they drift in in-increasing numbers.

Table 1 gives age specific rates of admission to mental hospitals for 1936 and 1951. The rate of first of admissions of persons 65 and over increased from 166.6 in 1936, to 214.5 in 1951. In 1951 the rate for this age group was 3 times that for all ages. In both 1936 and 1951 there was a higher admission rate for every higher age period with one exception in 1951 when there was a very slight decline from the decade 35-44 to the decade 45-54. In both years the rate was markedly higher for the age group 65 and over than for any other group

From 1936 to 1951 the number of persons 65 and over in the population of the United States increased 57.5%. During this same period the number of first admissions of persons 65 and over to state mental hospitals increased 95.3%.

DISEASES OF THE SENIUM

Table 1 shows that about 80% of patients 65 years of age and over admitted to state mental hospitals are diagnosed as having mental diseases of the senium. However, the proportion of resident patients of the same age, diagnosed as having these diseases, may be as low or lower than $\frac{1}{3}$ of the total number in this age group. The proportion varies with the states; for example, the percentage in the Illinois (1953) and Pennsylvania (1952) state hospitals was 43 and 33.8, respectively(10, 11).

The difference in the admission and residency rates of the group 65 and over, with mental diseases of the senium, is mainly due to the high death rate of newly admitted patients, diagnosed as having psychosis with cerebral arteriosclerosis and senile psychosis, and the long life of other patients, mostly schizophrenics, who grow old in the hospitals. In many cases the diagnosis of a mental disease of the senium is really a diagnosis of convenience decorated with a scientific term. This, of course, raises the apparent death rate from these diseases. Some aged persons *in extremis* who become delirious or otherwise troublesome are sent to mental hospitals where they quickly die.

A report based on a study by the California Department of Mental Hygiene states:

> Some patients die in the ambulance before they can be admitted, and others die a few days after admission. The mental difficulties of many of the aged patients seem to be incidental to terminal illness.

Among a group of newly admitted nonpsychotic patients studied in a special survey in California, were found such conditions as eating difficulties, incontinence, partial paralysis, untidiness, hypertension, and terminal heart disease. All were said not to need the special care and treatment facilities of a psychiatric hospital(12).

The lesson learned about the misuse of state mental hospitals to dispose of the dying in California is significant for the country as a whole. Twenty-three states have a higher admission rate than California of persons 65 years of age and over.

TABLE 1

NUMBER OF FIRST ADMISSIONS TO STATE MENTAL HOSPITALS PER 100,000 CIVILIAN POPULATION FOR ALL DIAGNOSES AND DISEASES OF THE SENIUM: U. S., 1936 AND 1951 *

Year and item	All ages	Under 15	15-24	25-34	35-44	45-54	55-64	65 and over
1951 total	67.9	2.5	54.3	76.1	85.6	83.8	90.0	214.5
Senium	18.6	0.0	0.0	0.0	0.3	3.6	28.3	186.2
1936 total	59.6	1.7	39.6	71.9	84.8	88.9	95.5	166.6
Senium	12.6	0.0	0.0	0.1	0.7	7.0	35.4	141.3

* Source: Patients in mental institutions 1936; 1950; and 1951. U.S. Government Printing Office, Washington 25, D.C. Based on data from hospitals reporting first admissions by age and diagnosis only.

However, the practice has been with us for a long time. A comprehensive survey of first admissions to the Warren State Hospital from 1946 to 1950 disclosed that 36.3% of persons admitted with mental diseases of the senium died within 3 months(13). It is a reasonable assumption that some of these were in extremis on admission. In a proper social organization most dying persons who now go to mental hospitals would be treated at public expense, when necessary, in chronic disease hospitals or in geriatric wards of general hospitals.

From 1936 to 1951 the admissions to state mental hospitals of persons 65 years and over with diseases of the senium increased 99.9%. It is probable that only a small proportion of this increase was due to admission of dying patients, but the marked and differential increase of such admissions supports the view that there is an unhealthy drift to mental hospitals of old people who are not suffering with anything except feebleness and poverty. The state comparisons shown in Table 2 throws further light on the subject.

The comparative statistics in Table 2 are based on 1950 because figures for the homes are not available for any other year. Statistics on total first admission to the mental hospitals were compiled for 5 consecutive years (1946 to 1951), and those on admissions of the 65-and-over group were compiled for 2 consecutive years (1950-1951). The figures showed a consistent pattern for the states with very little variation from year to year. It is therefore assumed that the 1950 figures are not isolated variations from the general state patterns and are reliable for comparative purposes.

A sampling of 13 States for the 4 years, 1950 through 1953, showed a few striking variations in the first admission rates of the 65-and-over group, but the combined rate for all the states was constant for the 4 years. The most significant changes were in Maryland with a 145.4% increase and in Colorado and Nebraska with decreases of 42.4% and 47.1%, respectively. The Pennsylvania ratio increased 21.4%. These state increases are assumed to be due mainly to increased pressure for admissions and the decreases to changes in policy.

The significance of the data given in Table 2 must be judged in the light of the factors influencing the rates of admission to and residence of aged persons in mental hospitals

TABLE 2

PERSONS 65 YEARS OF AGE AND OVER RESIDENT IN, AND FIRST ADMISSIONS TO, PUBLIC MENTAL HOSPITALS AND RESIDENT IN COUNTY AND CITY HOMES PER 100,000 CIVILIAN POPULATION 65 YEARS AND OVER, UNITED STATES AND EACH STATE: 1950 *

State	Public mental hospitals †		Resident patients in county and city homes
	First admissions	Resident patients	
United States	226.2	1,074.6	376.7
Alabama	87.6	523.7	131.9
Arizona	226.1	775.5	158.3
Arkansas	216.8	663.9	176.6
California	201.3	947.3	491.4
Colorado	293.3	1,472.7	42.4
Connecticut	350.7	1,491.4	403.3
Delaware	285.1	1,486.4	—
District of Columbia	513.5	2,761.5	—
Florida	88.5	466.7	79.2
Georgia	239.5	888.5	123.0
Idaho	195.4	852.9	273.6
Illinois	325.1	1,338.5	480.8
Indiana	138.0	721.9	577.6
Iowa	157.9	788.4	519.9
Kansas	67.0	858.5	337.3
Kentucky	177.7	731.7	235.6
Louisiana	123.8	685.4	49.2
Maine	158.2	872.2	47.0
Maryland	105.8	1,035.6	178.0
Massachusetts	—	1,706.6	359.9
Michigan	203.4	1,175.8	313.9
Minnesota	242.3	1,169.9	363.1
Mississippi	205.4	548.2	110.6
Missouri	100.2	738.7	429.9
Montana	196.7	1,060.4	426.9
Nebraska	279.3	1,038.0	76.7
Nevada	227.8	728.9	747.1
New Hampshire	415.3	1,370.5	967.3
New Jersey	370.9	1,325.1	448.6
New Mexico	96.9	550.9	—
New York	419.0	1,793.8	567.1
North Carolina	112.8	638.9	361.8
North Dakota	180.6	1,427.9	172.3
Ohio	145.7	876.7	717.2
Oklahoma	212.5	868.5	48.0
Oregon	249.7	975.4	274.5
Pennsylvania	152.6	945.7	634.3
Rhode Island	343.7	1,211.5	56.8
South Carolina	207.0	751.4	129.6
South Dakota	191.7	973.1	90.4
Tennessee	145.6	720.9	334.7
Texas	155.5	578.4	60.0
Utah	191.0	778.1	393.7
Vermont	326.3	1,618.9	184.7
Virginia	264.9	1,072.0	210.8
Washington	299.0	1,108.6	97.0
West Virginia	170.4	592.9	201.5
Wisconsin	319.2	1,575.2	196.2
Wyoming	209.3	1,068.6	99.1

* Source: First admission data from *Patients in Mental Institutions: 1950 and 1951*, Department of Health, Education, and Welfare, Public Health Service, National Institute of Mental Health, Bethesda, Md. U. S. Bureau of the Census, *U. S. Census of Population: 1950*, Vol. IV *Special Reports* Part 2, Chapter C Institutional Population.
† Includes state and county mental hospitals only.

already discussed, as well as other factors. An important consideration is the availability and use of beds for the aged in other institutions than mental hospitals.

According to the 1950 U. S. Census 3.1% of the population 65 and over were in institutions, including mental hospitals, but not general hospitals. The percentage in the various states varied from 1.0% in Alabama to 4.9% in New Hampshire.

Unfortunately, for the purpose of the present comparative state study, the census data for federal homes in which patients cross state lines are lumped with state homes. Persons in nonprofit, commercial rest and boarding homes may also cross state lines to some extent and admission is usually dependent upon ability to pay. The data for county and city homes given in Table 2 are more validly comparable to state hospital data in that they concern people who get into publicly supported institutions in their state of residence.

The age specific admission rate of persons 65 and over to public mental hospitals in the states varies from 67.0 per 100,000 to 419.0 per 100,000. Their residence rate in these hospitals varies from 466.7 per 100,000 to 1793.8 per 100,000. The resident rate of the 65-and-over group in county and city homes varies from 42.4 to 965.3 (1950).

Comparing the admission and residence rates of mental hospitals with the residence rates of county and city homes gives striking evidence that whether or not feeble persons needing public attention get into a mental hospital or home depends in many cases on what is available rather than on what is best for them. Judged within the framework of what is done in each state, it can be seen that, with few exceptions, if the county and city home rate is high the mental hospital rates are low, and visa versa.

This is more evident in some states than in others. To give a few striking examples, in Colorado, Washington, and Nebraska the admission rates of old people to mental hospitals are more than double those of Kansas, Ohio, and Pennsylvania. The residency rates of mental hospitals are much higher in the first 3 states, and conversely, the residency rates of their county and city homes are much lower than those of the latter 3 states. All states except one (Nevada) have a higher rate of persons 65 and older resident in mental hospitals than in county and city homes. Two states (Rhode Island and Colorado) have hospital rates 20 times higher than the home rates. In 3 large states (New York, Illinois, and Massachusetts) the hospital rates are from 3 to 5 times higher, and in 2 other large states (Pennsylvania and Ohio) the hospital rates are only one and one-half times higher than the home rates. Two states have no county or city homes.

With due allowance to the possibility that some states may be giving shelter to distressed aged persons that other states neglect, Table 2 furnishes abundant evidence that in many cases the wrong kind of shelter is furnished.

THE AGED IN SOME EUROPEAN COUNTRIES

The handling of the aged in England and some other European countries has been done with less misuse of mental hospitals and more satisfaction to the patients concerned than in the United States. The development of social measures designed to keep old people happy and contented have more nearly kept pace with their increasing number in the population. There is a strong feeling abroad against disposing of them by the mental hospital device. The results are partially reflected in comparative hospital statistics.

Landis and Page reported in 1938 that, in contrast with the United States, the first admission age curve in Switzerland, Norway, and Sweden increases up to age 40 (Switzerland) and age 35 (Norway and Sweden) and then levels off or decreases (14).

Table 3 shows that in Norway (1952) the admission rate now rises with age, but the rise is slight in comparison with the United States (1951). The rate of the 70-and-over

TABLE 3

AGE SPECIFIC FIRST ADMISSION RATES PER 100,000 CIVILIAN POPULATION FOR NORWAY (9), THE UNITED STATES, AND 2 STATES WITH POPULATIONS REASONABLY CLOSE TO THE POPULATION OF NORWAY

	Year	Age under 60	Age 60-69	Age 70 and over	All ages not age adjusted
Norway	1952	42.5	63.0	52.3	44.7
United States..	1951	50.8	109.5	276.3	66.5
Georgia	1951	46.8	123.8	270.8	59.8
Washington ...	1951	42.5	109.3	408.5	79.1

group in Norway is only 1¼ times higher than the rate of the under 60 group, while in the United States and the 2 given states, the rates are from 4½ to 10 times higher in the 70-and-over group. The rates for diseases of the senium follow the same pattern in each of the 4 jurisdictions.

The age admission curve in England and Wales also tended to level off or decrease in the older age groups, but by 1948 tends to lose its downward trend with advancing years and to approach the United States pattern(15). In 1952 the first admission rate of persons 65 years of age and over to public mental hospitals of England and Wales was 188 per 100,000(15). The first admission rate of the 65-and-over age group to state and county mental hospitals in the United States (1950) was 225.8 per 100,000.[2]

In 1951 in England and Wales 13.1% of first admissions were diagnosed as having senile psychosis or psychosis with cerebral arteriolosclerosis(16). In 1950 in the United States 26.6% of first admissions to state and county hospitals were diagnosed as suffering with these 2 diseases and in 10 of the states the percentage was 30 or more(8).

More adequate provision of other outlets, such as special housing projects, more hospital beds for the chronically ill, and more beds in publicly assisted homes, accounts for the smaller percentage of the feeble aged in mental hospitals in Europe.

Special housing projects in England and Scandanavia are built in or near centers of population and the tenants have easy access to theaters, churches, shops, etc. The flats have 1 or 2 bedrooms, a kitchen, pantry, bathroom, and special features like low windows, so that one sitting in a chair may look out, hand rails beside the bath and toilet, sloping ramps instead of steps. The occupants have their own furniture and in some cases pay a small rental for the flats largely or wholly out of pensions from the government(8). They live free of supervision but help is available if needed. The arrangement provides for actual needs and gives that feeling of independence, security, and worthiness so essential for the mental health of the aged.

[2] If all public mental hospitals in the United States were included, the gap between the United States and English rates would be wider.

Copenhagen has 8,000 flats built or in progress for pensioners and an Old Peoples Village for 1,600 men and women pensioners more disabled than those who live in flats. The Old Peoples Village has a hospital, single rooms, and small dormitories. Family life is encouraged and there are numerous outlets for activities of a social and occupational therapy nature. If one of an old couple becomes ill and must go to the hospital the other may take up residence there, in order to be near the patient.

These housing projects do much to keep feeble old people healthy, happy, and out of institutions, including mental hospitals, but chronic disease hospitals, geriatric units in general hospitals and homes for the aged are more effective barriers to the unhealthy use of mental hospitals by the aged.

The attitude abroad that has brought these alternate facilities into greater use than in the United States is partly expressed in the report of a committee of the British Medical Association (1947-1949)(17), which states:

> The committee is strongly of the opinion that cases of simple senile dementia should be regarded in a different light from other cases of mental disorder. . . . When senile dements are likely to remain docile and manageable as a result of care and treatment they should be accommodated outside of mental hospitals. . . . The Committee considers it unreasonable that cause should be given for such distress when the member in question is merely the victim of mental deterioration associated with age.

The British Ministry of Health in an effort to correct abuses and reverse the recent undesirable trend of aged persons to mental hospitals is urging geriatric wards with small psychiatric units in general hospitals, long-stay annexes, and residential accommodations for the aged with proper liaison between these various units and general and mental hospitals.

The attitude of the British is, in some measure, similar to that of those authorities in this country who say that 25% or more of aged patients admitted to our state mental hospitals should be cared for elsewhere. There is this difference, however: The British are chiefly concerned with protecting the aged while the Americans apparently are chiefly concerned with protecting the mental hospitals.

Without going into the question of where

to take care of obviously psychotic but tractable aged persons much can be done without specific efforts to protect anybody or anything. If sufficient beds were provided in publicly supported chronic disease hospitals or geriatric units of general hospitals, and in homes for the aged, thousands of those now sent to mental hospitals would be sent to these other institutions without any thought that they are psychotic and in need of psychiatric attention. The examples already referred to from Table 2 support this contention, and Pennsylvania, about which there is much information, gives special emphasis to it.

Pennsylvania (1950) has more patients in its state mental hospitals than any other state except New York(8). It therefore may be assumed for comparative purposes that it is reasonably, if not sufficiently supplied with mental hospital beds. However, of more significance is the fact that in Pennsylvania more mental hospital beds are being used by patients who need them and fewer by people who don't need them than in most other states. Thirty-four states have higher first admission rates of persons 65 years of age and over than Pennsylvania and 7 have more than double its first admission rates of such persons. In 11 states the residency rate in state mental hospitals of this age group is 40% or more higher than in Pennsylvania and in 2 states it is 80% higher (Table 2). In 1950, of 20 states for which statistics on resident patients in mental hospitals with diseases of the senium are available Pennsylvania had the lowest percentage(8). These relatively favorable conditions have been brought about not because some person or group in Pennsylvania was bent on protecting mental hospitals from abuse by the aged, but because of logical planning for needed medical and welfare relief.

Pennsylvania gives financial aid to 184 voluntary hospitals for the care of medically indigent patients and most of the counties contribute to patient care in nonprofit hospitals. Some other states and subdivisions of states give some degree of similar assistance. The most important difference is in county homes. Pennsylvania has 62 of these; 30 have hospitals, 14 of which are approved. The residence rates of the 65-and-over group in these homes is higher than that in all but 3 states, and in one instance 15 times higher. The homes are largely responsible for the favorable position of the Pennsylvania state mental hospitals in relation to the aged.

PUBLIC HOMES VERSUS MENTAL HOSPITALS

A public home for the aged is the proper place for numerous old people who now get into mental hospitals. In the United States there has been an unfortunate rebound from one bad situation to another. Indigent feeble old people, once herded and neglected in so-called poor farms with a conglomerate group of chronic psychotics, imbeciles, and idiots, are now indiscriminately sent to mental hospitals. Instead of improving the homes by taking away the idiots, imbeciles, and chronic schizophrenics, and building up the physical plant and quality of service, it became almost a religious rite to close them even though this involved herding up to 100 old people in one dormitory of a mental hospital where their real needs were ignored.

Some respondents to the questionnaire expressed fears that an attempt to reform matters might result in a return to the old poor farm system and this point frequently comes up in discussions of possible reforms. The justly condemned poor farm existed in an era of comparatively poor economic conditions and undeveloped social sense. It will not return. What is more to be feared is that state mental hospitals will become rather inadequate old peoples' homes. Already in the United States 25.7% of all first admissions to state and county mental hospitals are 65 years of age or over. In some states the percentage is over 30 and in one it is 46.9%(8).

With the increasing number of aged in the population and the growing tendency to dispose of those who become helpless by the mental hospital device, the outlook for the feeble aged as well as for mental hospitals is grave. Fortunately 14 states now have official commissions or committees on aging, some of which are paying attention to the mental hospitalization of the aged, and the mental hospital authorities in a few states are devising or seriously considering programs that will improve the lot of the aged while freeing the mental hospitals from a

burden that hampers their development as hospitals.

Whether or not some of the quite obviously psychotic and deteriorated but tractable old people should be cared for in other than mental hospitals, as is done to a certain extent abroad, is a moot question that may be decided either way depending upon local resources. But there is no doubt about the physically infirm, the delirious dying, the nonpsychotic, and the merely technically psychotic feeble old people. Several thousand of these go to the mental hospitals each year because there is no other place for them. They would be better off in institutions better equipped to meet their physical and emotional needs and, without them, the mental hospitals could do their own specialized work more efficiently.

Publicly supported homes for the aged should be attractive places, with accommodations for married couples, single rooms, no large dormitories, attached hospitals or close liaison with general hospitals, and recreational and rehabilitation programs designed to maintain or build up the essential sense of worthiness and self-respect.

This is not merely a problem of finding the proper shelter for those who need institutional attention. It requires a total program in geriatrics carried on by state and local governments and community agencies and a broad appreciation that the aged are happier and healthier when they live at home. Assisted housing prospects for the aged, mental health clinics, home treatment plans, golden age clubs, day centers, pensions, discriminating employment practices, and fixed age versus flexible retirement policies need attention and study so that agencies, services and practices may develop along lines designed to give maximum efficiency in preventing premature mental decay.

SUMMARY AND CONCLUSIONS

The number and percentage of aged persons in the population is increasing and will continue to increase for many years. The percentage of such persons admitted to public mental hospitals is increasing much more rapidly than their percentage in the population; and their admission rate to mental hospitals is increasing much more rapidly than that of younger persons. Although the incidence of mental disease increases with age, there is no evidence that a unilateral increase of mental disease among the aged in recent years has anything to do with these differential increases. Sociologic factors are mainly responsible.

In order of increasing numerical importance, delirious and other dying persons, nonpsychotic feeble persons, nonpsychotic old persons with chronic illness, and tractable old persons who technically may be called psychotic are being sent to our mental hospitals because there is no other place for them to go. No question about their mental condition would be raised if there were other facilities.

The increase of admissions of the aged to mental hospitals has been greater in the United States than in certain European countries with similar cultures. This is due to a relatively greater development abroad of other outlets for the infirm aged, and to drifting in this country toward the area of least resistance which is the state hospital.

Existing abuses at the institutional level should be corrected by:

1. Increased subsidies by the states and local government agencies to private general hospitals for the care of chronically ill, medically indigent aged persons.

2. Building by the states and local government agencies of hospitals for chronically ill, medically indigent persons.

3. Building by the states and local government agencies of homes for the aged designed for comfort rather than for mass herding and operated with rehabilitation programs. They should have adequate medical services.

4. There should be liaison between mental hospitals and public homes for the aged so that the aged who become troublesomely psychotic at the homes could be quickly transferred to a hospital and tractable old patients at the hospitals could, on request, be transferred to homes.

Intensified social programs and aid to the aged at the preinstitutional level tend to prevent or retard mental and physical deterioration and make institutionalization unnecessary in many cases.

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DISCUSSION

JOHN J. BLASKO, M. D. (Hartford, Conn.).—Dr. Kolb states that the number of aged persons admitted to mental hospitals is increasing much more rapidly than the number in the general population. This is true in Connecticut despite the 5,300 beds in voluntary chronic and convalescent hospitals, 600 beds under the jurisdiction of the Commission on the Care and Treatment of the Chronically Ill, Aged and Infirm, and the 4,900 beds in boarding homes and homes for the aged.

In Connecticut the population increased by 9.6% between 1950 and 1954; the number of people 60 years and over increased by 14% and yet the number of admissions of the 60 years and over to our State mental hospitals increased by 39% during this same period.

In the recent survey of Connecticut's State mental hospitals, made by the Commission on the Care and Treatment of the Chronically Ill, Aged and Infirm (to be published shortly), they concluded that the evidence indicates, at least in Connecticut, the "seniles" who can be cared for outside have not contributed to a substantial degree to crowding in mental hospitals, and that efforts undertaken by both the Department of Mental Health in its boarding-out program and the CIAI have now removed the substantial majority of such cases from the mental hospitals.

A summary of this survey follows:

1. A 10% random sample of the patients 60 years of age and older in Connecticut's 3 state mental hospitals was studied in detail.

2. A set of criteria reflecting dangerous or antisocial behavior was used to determine the feasibility of transferring such patients to chronic facilities.

3. The results of the survey indicate: (a) The number aged in mental hospitals who can be cared for elsewhere is an extremely small percentage of the total mental hospital population (6.5%) of which over half (3.5% of total) have already been removed, although carried on the mental hospital census. (b) The number of aged loosely termed "seniles" who may be cared for elsewhere is only 1.5% of the total mental hospital population.

4. The data would appear to indicate that the use of chronic facilities to care for aged persons who have been admitted to mental hospitals represents simply one method of providing appropriate care to persons who are in the normal discharge channels of the mental hospital system.

Another study was done by the same Commission on new admissions for the last 3 months of 1954. A total of 834 patients were admitted to Connecticut's 3 mental hospitals and, of these, 287, or 34.4%, were 60 years of age and over.

A study of these 287 patients, by the CIAI, indicates that in Connecticut only 38 people 60 years and over admitted to Connecticut's state mental hospitals each year would be appropriate candidates for facilities outside a mental hospital. This represents 1.1% of all admissions to the mental hospitals.

Despite these surveys all the psychiatrists in the Department of Mental Health in the State of Connecticut, and that includes our hospital staffs, feel that the success we have had in placing patients in chronic and convalescent hospitals, boarding homes, and other facilities (400) indicates that further efforts are justified in order to determine if psychiatry or some other medical specialty is better equipped to solve the problems of confusion, irritability, enfeeblement, childishness, etc., found in the aged. The mental hospitals have lists of approximately 600 patients or 7% of the total population that we feel could properly be treated and supervised in chronic and convalescent hospitals. We have already placed 7%.

I feel somewhat pessimistic because psychiatry

has always been the dumping ground of medicine in general. In Connecticut we have set up a program to educate psychiatrists and other physicians in the necessary procedures. We are taking calculated clinical risks and are vulnerable to criticism because of these efforts, but again we feel it is good medical practice and that we are interpreting the public's wishes to keep abreast of current sociomedical trends in this field. It takes a very courageous psychiatrist to withstand some of the pressures that have developed because of this program.

Our mechanics make it easy to transfer patients back and forth in order to avoid the hardships of recommitment, and to permit the staffs of the mental hospitals to learn the types of patients that will not be returned to them and at the same time will permit the staffs of other facilities to get acquainted with the problem and perhaps develop research and treatment programs for these aged, sick people. We hope in the next 2 years to come up with some definite findings that psychiatrists and nonpsychiatrists can agree upon.

PERTINENT STATISTICS FOR CONNECTICUT

1. Approximately 6% of the 60 years and over population are in institutions.

2. Slightly less than 2% of this group are in the State's mental hospitals.

3. There are 2,000 beds in homes for the aged.

4. There are 1,300 beds in town homes.

5. There are slightly over 5,300 beds in chronic and convalescent hospitals (2,500 of these are welfare cases).

5. There are 1,600 beds in boarding homes.

7. There are appproximately 4,200 patients 60 years and over in the mental hospitals.

8. There are 293,600 people 60 years and over in Connecticut's population of approximately 2,150,000.

9. There are 43 non-profit hospitals with 8,317 beds.

10. There are 12 private mental hospitals with approximately 4,000 beds.

11. There are 3 city hospitals with 495 beds and 14 state-operated hospitals with 14,290 beds.

PSYCHIATRIC METHODS OF TREATMENT IN A NEURO-PSYCHIATRIC HOSPITAL [1]

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The establishment of a physical medicine and rehabilitation service in a neuropsychiatric hospital does not indicate that the psychiatrist, with his emphasis on individual therapy, is being displaced or relegated to an unimportant administrative function. On the contrary, it recognizes the well-known fact that patients must be given multiple opportunities to work and to play so that socialization in the hospital community life takes place in accordance with the improvement in their mental illness.

Activities should be selected for the patient's special needs, interests and capacity, and these activities should be graded and expanded. Idleness is debilitating, particularly when it is prolonged for any reason, and this is especially true for the chronic psychotic. It is, therefore, through planned physical medicine and rehabilitation activities that the patient's attention may be elicited, lethargy diminished, initiative stimulated, and self-expression induced. Such activity releases emotional stress, develops initiative and confidence, fosters morale and feelings of well-being and enhances security and self-respect. It should be understood that activities offered in physical medicine and rehabilitation have profound and everpresent psychological implications. It is the duty of the physician, trained in the psychiatric applications of its principles, to understand their workings and to use them for the maximum benefit of the patient, as well as to avoid or minimize effects that would be harmful. The psychiatrist so oriented must be able to impart this knowledge to the various specialized therapists under his direction. The program is an aid to the psychiatrist who realizes that many members of our chronic psychotic population must be treated in a closely integrated treatment program(1).

From time immemorial the sedative effects of hydrotherapy have been known and utilized in various ways throughout the world. Physical medicine provides these facilities for us through the continuous-flow tubs, where an excited patient may remain many hours until improved. When the patient is exceedingly violent and dangerous, quieting effects coupled with good control are obtained by means of the neutral pack, as modified by Rackow and Taylor(2). Depressed patients are assisted by the stimulating effects of the needle shower and the Scotch douche.

In order to provide as many possible outlets as feasible for the expression of the patient's instinctive and creative life a great variety of opportunities must be made available to him. In this way he can "find his level," feel secure, and find satisfaction in achievement. Furthermore, shifts may be made from one activity to another in a search for hidden talent.

Occupational therapy reaches patients in every ward of the hospital as soon as a working diagnosis is made. The arts and crafts are used for the more severely incapacitated patients where the therapist provides activities that allow release of anxiety and hostility with restoration of work habits. Finger painting, metal hammering, and clay modeling provide an outlet for nonverbal expression which may serve as an "opening wedge" to the inner workings of the disturbed thought processes. The Sunshine Home Kitchen(3) provides a home-like atmosphere for many of our women patients as well as for some of the men.

In a flexible arrangement whereby patients can progress from one activity to another, "graduation" to manual arts therapy provides a great lift to the ego. Association with male therapists and patients provides opportunities for the men to work out various relationships with their own sex.

We have been experimenting with a motivation clinic where only two or three simple activities are in progress. This is a large room, very simply furnished where, at present, only poppy making and furniture sanding take place. Here many patients who had failed in a more complex shop were sufficiently stimulated to return to other shops and make a success of their work there.

Corrective therapy is directed toward providing activity where the tendency is to remain inactive and sedentary. This is graded and graduated to meet the individual's needs. In the combative or destructive patient,

[1] Read at the annual convention of the American Congress of Physical Medicine, Chicago, Ill., 1953.

punching bags, medicine balls, and throwing and hitting baseballs provide outlets for aggressions. Although the emphasis is toward playing with others we have been experimenting with boxing between patients; this activity has been in operation for about 2 years and of course is carefully supervised. This technique is now being evaluated clinically and will be reported later.

Educational therapy appeals to the patient who prefers intellectual to manual activity. Current-event sessions and discussion groups provide a useful outlet for these patients. Here they learn to exchange ideas with other members of a group, asserting themselves in a controlled situation and learning how to share their feelings and thoughts. Learning that others have similar feelings, and ideas discourages their self-imposed isolation and thoughts of being different from others. The role of physical rehabilitation in neurological disabilities has been thoroughly discussed by Dr. A. B. C. Knudson(4).

The Veterans Administration believes in the dynamic rehabilitation of the disabled veteran and his effective employment thereafter. The therapy must be individualized with emphasis on eventual independence of the patient. This idea is becoming increasingly important for with increasing life expectancy will come an increase in the number of patients with neurological disorders.

From a statistical standpoint about one-third of the neuropsychiatric patients in general hospitals of the Veterans Administration are neurological cases. Among the casualties of World War II there are about 20,000 cranio-cerebral injuries, almost 3,000 paraplegics, and 600 post-traumatic aphasic patients. Neurological residuals from acute infections were proportionately far greater in World War II than in World War I, since chemotherapy and improved treatment methods saved the lives of many who, with similar diseases, would have died in World War I. To these figures must be added the casualties of the current Korean conflict.

Inasmuch as the primary goal of treatment is restoration of function, understandably physical therapy is fundamental and other therapies adjunctive. These may play their roles by direct utilization of affected parts in occupational or reconditioning activities or by enhancing the patient's ego and self-confidence by achievement so that he is encouraged to "carry on" in spite of limitations.

Physical medicine has been effective in the broader aspects of total rehabilitation from bed to job and for preparing the veteran for normal living in his community. Thus he ceases to be a burden and becomes a positive force as a citizen. The increase in poliomyelitis indicates the increased seriousness of the problems of rehabilitation.

Another phase of rehabilitation is the retraining of lobotomized psychiatric patients. A coordinated program in which the entire facilities of the rehabilitation team are utilized to retrain such patients through a period of emotional childishness and helplessness toward adult self-sufficiency and virtual independence is described elsewhere(5). In addition, the families are taught how to continue this program after the patient has been released from the hospital. Some 41 of the 115 patients operated upon have been able to leave the hospital.

From time to time there is a tendency toward encouraging the use of physical medicine in the home. An opinion from England concerning this practice has been given by Mr. Arthur Blenkinsop, Parliamentary Secretary to the Ministry of Health(6). He states that nothing can take the place of a properly equipped hospital or clinic for such services. When the condition of the patient requires home treatment this should be given with the ultimate plan, if at all feasible, that arrangement be made as soon as practicable for continuing treatment on a broader scale in a properly equipped center.

There are two important factors in the success of any program. One has to do with the great potentialities of the patient and the other refers to the impact of the personality of the therapist who is trying to expand these potentialities. The physician in charge of a rehabilitation program must, by his leadership, overcome many of the established prejudices against the handicapped and disabled. Such patients have strong feelings of inferiority and rejection which they constantly use to frustrate all attempts at success. Not infrequently the disability is primarily anxiety and fear rather than true lack of function; in such instances careful construc-

tive work with the ego-satisfaction is necessary for the patient to regain faith in his fellowman and thus, also, in himself. By displacing attention from the defective features of the physical or mental status and providing visible evidence of success in other areas, we enable the patient to compensate for his difficulties. The basic principle of initiating treatment early applies to rehabilitation as forcefully as to other fields of medicine. The program is comprehensive enough and flexible enough to make possible the utmost development of the patients' potentialities; early failures merely indicate that further study and planning, through frequent staff meetings, are needed in order to obtain the maximum not only from the staff but also from the patients.

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DISCUSSION

DANIEL DANCIK, M. D. (Huntington, N. Y.).—There is no doubt that the physical medicine and rehabilitation departments in all neuropsychiatric hospitals of the Veterans Administration with the 5 distinct, but highly integrated, therapeutic sections have removed the depressing and deteriorating atmosphere that exists in many institutions for the mentally ill. These departments have been expanded so that essential therapy can be administered to both the acutely and chronically ill patients. It is only through the efforts of those who are aware of the benefits derived from these physical medicine and rehabilitation activities that the environment of our neuropsychiatric patients can be improved. These efforts might lead to the organization of similar services in our state-controlled mental hospitals and other mental institutions. Many of these institutions have failed to provide the treatment which such a service can give to the chronic patients. Insufficient funds have been frequently given as a reason for this neglect. The shortsightedness of physicians, psychiatrists, and lay administrators in failing to appreciate and to accept physiatric approaches to neuropsychiatric treatment, the inability of the medical profession to awaken the public and our legislators to the seriousness of the problem are other reasons; likewise, the tendency to regard the chronically ill patient as "hopeless."

Recently Dr. Kenneth Appel, in an address before the Section on Nervous and Mental Diseases of the American Medical Association, discussed the frustrating statistical results of some of our presently accepted treatments, namely insulin coma therapy and electroconvulsive therapy. He concluded that after the first 5 years, based on statistical data, the so-called nonspecific form of treatment was just as effective in raiting the discharge rates from hospitals. By inference then, the need for expanding physical medicine and rehabilitation in all neuropsychiatric hospitals becomes evermore important. It is, of course, important that the specialist in physical medicine and rehabilitation who is normally well grounded in all phases of orthopedic and neurologic medicine be likewise aware of the psychiatric and psychologic and social implications.

A more hopeful sign for the future of the neuropsychiatric patient is the recent organization of the Medical Rehabilitation Committee of The American Psychiatric Association and the Committee on Correlation of Psychiatry and Physical Medicine and Rehabilitation of the American Congress of Physical Medicine. These two separate committees, consisting of physicians of two different specialties, are now meeting to discuss the relationship of physical medicine and rehabilitation and psychiatry in order to further the rehabilitation of the neuropsychiatric patient.

CONTRIBUTION TO THE SURVEY OF HANDWRITING

The "Gestalt" of Handwriting of Apparently Normal Persons in Comparison with Specimens of Institutionalized Mental Patients

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Introduction and Outline of Problem

The *Gestalt* of handwriting can be defined as the complexity of form, form-relationships, rhythm, and the totality of proportions of letters, words, lines, and the whole script to the surrounding area of paper. Since the *Gestalt* of spontaneous handwriting has a tendency to uniqueness and specificity, individual as well as group specifity, it has been successfully used for personal identification, for the detection of forgeries, and for other forensic purposes.

For the same reason handwriting has been explored for personality evaluation by many thorough investigators like Klages(1), Pulver(2), Victor(3), and Roman(4). Unfortunately this branch of handwriting study, also called "graphology," has not yet developed a useful method of quantitative evaluation as have other psychological methods. When results are not obtained by exact methods, but predominantly in an intuitive, artistical way, there is necessarily a lack of control, and such speculation arouses skepticism in the critical reader. Charlatans and shrewd business men have used such methods for the economic exploitation of a common naïve curiosity and interest in the immanent features of one's handwriting. In this way the term "graphology" became afflicted with the derogative meaning of a pseudo-science. The following exposition may help to reverse this trend. Conforming with Romano(5), I here attempt to apply a scientific method to an area of psychology, "formerly dealt with more or less exclusively in terms of intuition and revelation."

The primary interest in the analysis of *Gestalt* in handwriting is derived from the impression that this type of specific personality expression seems to vary with (1) marked changes in the dynamic state of a person, especially with fundamental changes from health to disease and vice versa, and (2) the degree of maturity or adaptability to stress(6). This investigation attempts to determine quantitatively a basic configuration in the handwriting of apparently normal individuals and possibly detect any variations that may occur in a marked disorder of personality.

That characteristic changes in handwriting take place during disturbances of the mental equilibrium was observed and studied by a number of investigators(7, 8, 9, 10, 11, 12). There were already methods advised for the quantitative evaluation of handwriting features, *i.e.*, of the pressure by Harrer (13), Kraepelin(14), Lennep(15), Pascal (16), Roman-Goldzieher(17, 18), Vernon (19), of speed and curvature by Stein Lewinson and Zubin(20). Even special microscopes were advised(21). Writing pressure, grip pressure, and writing speed were measured with a refined writing scale by Kluge, Steinwachs and Barmeyer(22, 23, 24).

Experimental testing of writing may be useful in a large series of subjects in order to compare different groups of persons subjected to the same test, but does not seem to be very revealing in evaluating quantitatively the individual personality. I agree with Victor(3):

> Persons writing under experimental conditions may be disturbed by every strange detail of the test. Spontaneity may be lost under observation, for the writing hand is extremely sensitive to any change of normal conditions.

For examining spontaneous handwriting, the method used by Muhl(25) seems more promising. She actually measured a number of features in scripts. According to her findings, definite changes in cases of emotional and mental disorders could be detected, *e.g.*, a diagnosis of emotional instability is warranted by marked oscillations of the writing angle, by sudden pressure, change of size, wavy lines, imbalance between the zones and

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breaks. She found the writing of paranoids to be rigid, of schizophrenics with paranoid trend not only rigid, but with a remarkable change of the writing angle. Muhl's methods included careful measurements in millimeters and fractions of millimeters of all down strokes of the middle zone, all writing angles, and some other very meticulous procedures. Her results have a high theoretical value, because they confirm again that there are explorable correlations between handwriting and personality. But for practical purposes and for the evaluation of the total *Gestalt* we must develop less-time-consuming methods.

The ingenious Rorschach test makes a relatively quick investigation of the basic and integral personality factors possible; a similarly fast, quantitative handwriting test would not only serve many useful purposes, but could also avoid the unfavorable test situation that is inseparable from the Rorschach and other psychological tests.

METHOD

Development of a method according to the principles outlined above is possible, depending on the verification of certain hypothetical form-relationships, analogous to the rules of proportion, demonstrated by the investigator for certain body measurements(*26*). The so-called "Golden-Section"-ratio (GSR) (a distance is divided so that the total distance is related to the larger segment as the larger segment to the smaller one[2]), is also detectable in certain form-relationships of a normal script. This ratio is for the proportion of the larger segment to the total distance approximately 0.62 and for the proportion of the smaller segment to the total distance approximately 0.38.

We measured the total length of the middle zones of all the words on one page and set this sum in proportion to the total length of all the lines, margins and space between words included. A map measure (No. 1743, Keuffel and Esser Co.) was used. This instrument, because it adds automatically the single word lengths, is more efficient and economical than a scale. Measurement of an average page can be performed in as little as 3 minutes. The sum indicated by the map measure is then divided by the product of the width of the paper and the number of lines. This fraction is calculated quickly with the help of a slide rule or a nomogram. The whole procedure needs less than 5 minutes.

In measuring the words, the instrument must always be set down on and picked up from the paper respectively at the beginning and the end of the middle zone of each word. If the up-and-end strokes extend into the upper and lower zones of letters, those parts must be excluded from the measuring, but blank spaces due to disconnections between letters within words have to be included; the map measure should slide over those spaces and be picked up only over spaces between words and over margins. This procedure is based on the fundamental consideration that we measure a *Gestalt* phenomenon that is closely connected with the thought content of each unit. Since a part of a word cannot be looked on as a unit in building up thoughts, the spaces inside of words must be included in the word measurements.

Although there seems to be a tendency toward compensatory formations in the distribution of words and blank spaces in the handwriting of a normal person, only fully covered pages should be measured for this sort of script survey and possibly no front pages containing date and address.

The final value, called the word-line-ratio (WLR), is compared with 0.62, the abovementioned upper GSR, and the result is set down as positive or negative difference from this hypothetically ideal value. This procedure is justified, if the hypothesis of the unconscious tendency in a normal script to meet the upper GSR, is defensible.

This hypothesis must first be verified by testing the scripts of normal individuals. Twenty-seven handwriting specimens of men and women, selected at random, were tested. The apparent normality of the subjects was assumed as each showed mature behavior in occupational and social performance. Handwriting of subjects who were known to be emotionally unstable, immature in behavior, physically ill, or mentally unbalanced were deliberately excluded from this normal series (Table 1) as were those in which the

[2] According to Euclid II, 11; see Webster's New International Dictionary, 2d edition, 1952, Merriam, Springfield, Mass.

TABLE 1

WORD-LINE RATIOS IN SCRIPTS OF 27 APPARENTLY NORMAL PERSONS. DEVIATIONS FROM THE GOLDEN-SECTION-RATIO. CALCULATION OF MEAN, STANDARD DEVIATION AND STANDARD ERROR OF MEAN.

A = The closest whole to the mean M
σ = Standard deviation
σ_M = Standard error

Number N	WLR in hundredths	Difference between WLR and GSR x	X-A	$(X-A)^2$
1	68	+6	+5	25
2	58	−4	−5	25
3	62	0	−1	1
4	55	−7	−8	64
5	57	−5	−6	36
6	68	+6	+5	25
7	64	+2	+1	1
8	67	+5	+4	16
9	62	0	−1	1
10	60	−2	−3	9
11	70	+8	+7	49
12	64	+2	+1	1
13	59	−3	−4	16
14	63	+1	0	0
15	63	+1	0	0
16	68	+6	+5	25
17	62	0	−1	1
18	64	+2	+1	1
19	62	0	−1	1
20	60	−2	−3	9
21	67	+5	+4	16
22	60	−2	−3	9
23	64	+2	+1	1
24	70	+8	+7	49
25	70	+8	+7	49
26	62	0	−1	1
27	57	−5	−6	36
		+62		467
		−30		
		+32		

Mean: $M = +1.185$
$A = +1$

$$\sigma = \sqrt{\frac{\Sigma(x-A)^2 - n\cdot(M-A)^2}{n-1}}$$

$$\sigma = \sqrt{\frac{467 - 27.(0.185)^2}{26}} = \pm 4.23$$

For the transgression probability of 1% and degrees of freedom of:

$n - 1 = 26$
$t = 2.78$
$t\sigma = \pm 11.8$

$$\sigma_M = \frac{\sigma}{\sqrt{n}}$$

$$\sigma_M = \pm \frac{4.23}{\sqrt{27}} = \pm 0.81$$

For the transgression probability of 5% and degrees of freedom of:

$n - 1 = 26$, $t = 2.06$
$t\cdot\sigma_M = \pm 1.7$

spontaneity of writing was evidently interfered with, *e.g.*, airmail letters with purposely narrow margins and writing cramped to economize on paper and postage.

In order to compare measurements of the WLR of institutionalized mental patients with the results from our normal series, handwriting specimens of 25 mental patients, including, schizophrenics, manic-depressives and organic psychotics, were selected at random (Table 2).

RESULTS AND STATISTICAL EVALUATION

The results of the measurements and calculations of the 27 normal scripts are shown in Table 1. The first column contains the number of cases, the second one the WLR's, the third column the positive and negative deviations in hundredth of the WLR's from the upper GSR, the fourth column gives the differences from the mean (respectively its closest whole figure), the fifth column shows the squares of the figures of the fourth column.

The statistical evaluation of the results by using the tables of Fisher and Yates(27) revealed that the mean difference of 1.185 from 0 was not significant, if the average instrumental aberration and its standard error were taken in account.

In determining the instrumental aberration, resulting from use of the map measure, one must be aware of two possible sources of error, both causing plus-variations: (1) The momentum of the hand guiding the instrument continuously in the same direction; (2) the momentum of the measuring wheel, gliding over the paper.

These plus-variations are expected to increase directly with the number of times the instrument is picked up and set down on the paper, in our measurements approximately 80 times per script.

If the aberration of the measurements with our map measure is determined for a distance of 1 inch, 80 times, and the results in 27 of such series (corresponding to the number of scripts examined) are noted (Table 3), an average plus-variation of +1.746 (approxim. +1.75) = +2.19% of 80 (real value) is obtained. The standard error of ±0.36, multiplied with the proper t-factor of 2.06 (for a degree of freedom of 27 − 1 = 26 and the transgression probability of 5% [see Fisher and Yates(27)], is ±0.74 = ±0.93% of 80.

The average instrumental plus-variation of +2.19% (see above), calculated for the GSR of 62 (in hundredth) which is the hypothetical basic figure, is +1.36. Deducting this figure from our

TABLE 2

DIAGNOSIS, AGE, WORD-LINE RATIOS (IN HUNDREDTHS) AND THEIR DEVIATIONS FROM THE GOLDEN-SECTION-RATIO IN SCRIPTS OF 25 PATIENTS

No.	Diagnosis	Age	WLR in hundredths	Deviation of WLR from CSR in hundredths
1	Manic depressive...	48	50	− 12
2	Schizophrenia ..... Catatonic type	59	69	+ 7
3	Manic depressive...	41	65	+ 3
4	Schizophrenia ..... Paranoid type	34	61	− 1
5	Schizophrenia ..... Hebephrenic type	30	80	+ 18
6	Schizophrenia ..... Paranoid type	58	79	+ 17
7	Schizophrenia ..... Paranoid type	60	70	+ 8
8	General paralysis .. Cerebral type	57	87	+ 25
9	Schizophrenia ..... Catatonic type	25	60	− 2
10	Schizophrenia ..... Paranoid type	68	66	+ 4
11	Schizophrenia ..... Paranoid type	58	59	− 3
12	Schizophrenia ..... Paranoid type	60	68	+ 6
13	Psychosis—residual of polioencephalitis.	57	71	+ 9
14	Schizophrenia ..... Paranoid type	38	53	− 9
15	Inadequate personality—chronic alcoholism	47	72	+ 10
16	Schizophrenia ..... Undifferentiated type	47	62	0
17	Manic depressive reaction ..... Depressive phase	64	82	+ 20
18	Encephalopathy .... Traumatic	37	80	+ 18
19	Presenile dementia .	59	44	− 18
20	Schizophrenia ..... Paranoid type	67	59	− 3
21	Schizophrenia ..... Paranoid type	66	61	− 2
22	Psychotic depressive reaction	23	68	+ 6
23	Schizophrenic reaction ..... Catatonic type	26	40	− 22
24	Chronic brain syndrome associated with trauma; psychotic reaction ..	24	76	+ 14
25	Schizophrenia ..... Hebephrenic type	40	74	+ 12

TABLE 3

DETERMINATION OF THE AVERAGE INSTRUMENTAL ABERRATION AND OF THE STANDARD ERROR IN A SERIES OF 27 GROUPS OF 80 MEASUREMENTS (WITH A MAP MEASURE) OF ONE INCH EACH

(Value obtained in inches = v; difference between the obtained value and the real value (80) = x; A = the closest whole to the mean M; σ = standard deviation; σ_M = standard error.

n	v	x	x-A	(x-A)²
1	2	3	4	5
1	84.5	+ 4.5	+ 2.5	6.25
2	83.6	+ 3.6	+ 1.6	2.56
3	84	+ 4.0	+ 2.0	4.00
4	85.4	+ 5.4	+ 3.4	11.56
5	83.8	+ 3.8	+ 1.8	3.24
6	82.9	+ 2.9	+ 0.9	0.81
7	79.6	− 0.4	− 2.4	5.76
8	82.4	+ 2.4	+ 0.4	0.16
9	82.7	+ 2.7	+ 0.7	0.49
10	78.9	− 1.1	− 3.1	9.61
11	79.5	− 0.5	− 2.5	6.25
12	83.8	+ 3.8	+ 1.8	3.24
13	82.0	+ 2.0	0.0	0.00
14	80.8	+ 0.8	− 1.2	1.44
15	81.5	+ 1.5	− 0.5	0.25
16	81.0	+ 1.0	− 1.0	1.00
17	81.4	+ 1.4	− 0.6	0.36
18	80.5	+ 0.5	− 1.5	2.25
19	79.9	− 0.1	− 2.1	4.41
20	80.5	+ 0.5	− 1.5	2.25
21	79.6	− 0.4	− 2.4	5.76
22	78.25	− 1.75	− 3.75	14.0625
23	84.1	+ 4.1	+ 2.1	4.41
24	81.3	+ 1.3	− 0.7	0.49
25	81.7	+ 1.7	− 0.3	0.09
26	82.0	+ 2.0	0.0	0.00
27	81.5	+ 1.5	− 0.5	0.25
		+ 51.4		90.9525
		− 4.25		
		+ 47.15		

$M = +1.746 = +2.19\%$ of 80; $A = +2$;

$$\sigma = \sqrt{\frac{\Sigma(x-A)^2 - n(M-A)^2}{n-1}}$$

$$\sigma = \sqrt{\frac{90.9525 - 27.(-0.254)^2}{26}}$$

$$\sigma = \pm 1.85$$

$$\sigma_M = \frac{\delta}{\sqrt{n}}$$

$$\sigma_M = \pm \frac{1.85}{\sqrt{27}} = \pm 0.36$$

For the transgression probability of 5% and degrees of freedom of:

$$n - 1 = 26$$

$$t = 2.06$$

$$t \cdot \sigma_M = \pm 0.74 = \pm 0.93\% \text{ of } 80$$

mean difference between the WLR and the GSR of +1.185 (Table 1), the actual mean difference of −0.175 results. This figure has to be compared with the plus- or minus-variation of the control measurements of ±0.93% which corresponds to the value of approximately ±0.58, calculated for the basic figure of 62.

The actual mean difference of −0.175 ±0.58 cannot be considered as significantly different from 0, even without applying the much larger statistical variation of ±1.7 (Table 1), calculated for the 27 scripts. Therefore, our hypothesis that the WLR will match normally the GSR is empirically justified.

The obvious question was whether or not the same rule would apply to the scripts of patients. A calculation of a mean for the patients (Table 2) was not feasible, because this group is too heterogenous diagnostically. Besides our intention was to test the scripts of individual patients and not of groups. In comparing the patient's single differences between the WLR's and the hypothetically ideal GSR (Table 2) with the mean of the normal group (Table 1), a deviation by chance from the GSR has to be taken in account.

Since single WLR's of patients are compared with the GSR, a standard deviation from the mean is to be calculated. According to Table 1 we find $\sigma = \pm 4.23$, and this entity has to be multiplied (for a transgression probability of 1% and a degree of freedom of 26) with $t = 2.78$. Therefore the normal range of the deviation from 62 (the GSR in hundredth) is: ±1.185 (approxim. 1.2) ±11.8.[3]

Any difference between a single patient WLR and the GSR beyond +13 or −10.6 should be considered as significant. It is noticed that in 9 patients (Nos. 1-5-6-8-17-18-19-23-24) the WLR deviation from the GSR is outside the range of chance. This means, if the hypothesis that there may be an unconscious drive to match the WLR with the GSR is right, this impulse could not have functioned in 9 patients. It is interesting to notice that 4 of them (Nos. 8-18-19-24) are cases with organic brain disease.

Discussion

A critical discussion of the results will probably point out that if of 25 patients only 9 showed a significant difference (a probability of 0.36), the test would have no practical value. But this argument cannot be maintained, because this method is only the first of quantitative survey tests that can be applied quickly and easily to scripts without any expensive equipment.

If this type of Golden-Section-Test would not help to detect a mental or emotional abnormality in a single case, a similar follow-up test might be positive. Suppose we could develop only two more similar tests of the same degree of probability, the probability that at least one of them would show a significant deviation from the normal value in a single subject would increase from $P = 0.36$ to $P = 1 - 0.64^4 = 0.74$. For five different tests which could be performed in less than 30 minutes, the probability would then rise to approximately 0.90.[4] This means that a handwriting survey, similar to the one developed in this paper, performed in 5 different ways, could educe with a high degree of probability important information on the mental stability of a person.

The outlook for the development of other similar tests appears favorable, if we realize that the method used in this investigation is concerned only with the horizontal distribution of words and blank spaces. The vertical distribution which seems to be equally important will be tested likewise by integrative methods.

Furthermore, our method, applied to this test series, is concerned only with one-dimensional features, but two-dimensional surveys of scripts, with the help of integrating instruments, *e.g.*, a planimeter, are possible and may prove valuable.

Were no other test able to elicit psychomotor abnormalities in handwriting speci-

[3] These figures are not to be corrected in terms of the instrumental aberration and error, because the normal range as well as the values of the patients are obtained by using the same instrument.

For the establishment of the probably normal range of the WLR the investigator preferred the 1% transgression probability to the 5% one though the latter is more common in clinical research. The 1% transgression probability which means that of 100 measurements of the WLR only one will fall outside the established range by chance, results in a wider normal range. In this way fewer values of patients will be outside this range but considered as pathologic with a higher degree of probability, than by comparison with the more narrow range which would follow from the 5% transgression probability.

[4] These values of probability are calculated for independent tests. Since independency cannot be assumed, if the tests are applied to the same individual, the figures may claim only a heuristic value.

mens, this one could still be applied despite a relatively low degree of probability; for the discovery of even a small number of pathological cases is beneficial, especially with a test so easily and quickly performed. It may be thought of as a partial screening test, almost like a sputum smear in tuberculous patients. Only a positive result will count; a negative one would not mean absence of emotional or mental imbalance just as a negative sputum test does not mean that the patient does not harbor any TB bacilli.

Unconscious tendencies to certain form-relationships in handwriting have already been pointed out by Wolff(28), who was searching for "balance and consistency" in scripts by measuring single proportions. In our investigation a survey of *Gestalt* in handwriting is performed with the help of an integrative method which attempts to penetrate the immanent features of the total *Gestalt* in a script.

Although 27 specimens of apparently normal subjects may seem too small a number for far-reaching conclusions, biometrical testing of the results points to the value of this method, and publication of this test series seems justified. Plans are in progress to enlarge this sample and possibly add other similar tests in order to increase the practical value of the method.

Summary

1. By applying technical methods and mathematical principles to the survey of *Gestalt* in handwriting the shift from solely intuitional comprehension to scientific testing and practical evaluation is begun.

2. The tests are performed with the help of a map measure, a simple device which makes a quick integrative measuring possible.

3. On scripts of 27 apparently normal individuals the following hypothesis is tested and found to be justified: The total of the length of words, measured in the middle zone of letters, is related to the total length of lines according to the principle of the "golden section."

4. Among 25 institutionalized mental patients were 9 cases whose scripts revealed proportions not conforming with the principle of the "golden section."

5. The results of this investigation, evaluated by tests of significance, advocate this method as a sort of graphometrical screening test. The author intends to supplement it with other tests, according to the principles of integrative survey.

ACKNOWLEDGMENT

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THE CONCEPT OF A THERAPEUTIC COMMUNITY[1]

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Applied to a psychiatric hospital the term "therapeutic community" implies that the responsibility for treatment is not confined to the trained medical staff but is a concern also of the other community members, *i.e.*, the patients. How far can patients usefully participate in the treatment of other patients and how will this participation affect them? How far can they in turn be helped by other patients?

The importance of staff tensions as they affect treatment have long been recognized and the work of the Chestnut Lodge group has had a profound effect on the thinking and practice of psychiatric nursing and we hope of psychiatrists themselves. This subject has been ably discussed in the recent publication by Stanton and Schwartz(1). Relatively less attention has been paid to the social life of patients when staff are not present and the therapeutic possibilities this social interaction may have. Attention has been drawn to this subject by the interesting experiences of Caudill, a social anthropologist, who was admitted to a mental institution for 2 months as a patient in order to study the social situation from the patients' point of view. He states(2):

> While the staff exercised control over the patients, they did not give recognition to the patient world as a social group, but rather, they interpreted the behavior of the patients almost solely in individual dynamic-historical terms. The patient group, thus lacking an adequate channel of communication to the staff, protected itself by turning inward, and by developing a social structure which was insulated as much as possible from friction with the hospital routine. Nevertheless, such friction did occur, and the subsequent frustration led to behavior on the part of the patients which, although it overtly resembled neurotic behavior arising from personal emotional conflicts, was, in fact, to a considerable extent due to factors in the immediate situation.

If a therapeutic community with active patient participation is to be established in any psychiatric treatment unit a drastic revision in existing staff and patient roles and role relationships will be called for. It is clear that the changes that might be attempted will depend on many factors, including the type of patient, the treatment goals, the previous training of the staff, the degree of self-determination and freedom of action granted to the center, the culture of the adjacent hospital, if any, the culture of the wider community, economic factors, etc. In this presentation, however, we are assuming positive sanctions from higher authorities, complete freedom shared by staff and patients alike to organize the community, and a single therapeutic goal, namely the adjustment of the individual to social and work conditions outside, without any ambitious psychotherapeutic program.

Detailed description of all the role changes and social reorganization which, in our experience, are necessary cannot here be undertaken(7); however, certain main points can be discussed. The psychiatrist has, like all doctors, been given and accepts many of the qualities of the witch doctor. His greater knowledge is assumed in all treatment situations whether individual or group. The patient understandably enough wants to feel that the doctor knows what he is doing and by his attitude contributes to what is often an illusion. The doctor maintains many of the symbols of his office even when they have no immediate usefulness, *e.g.*, the traditional white coat, prominent stethoscope, and, in the U.S.A., the peculiarly ugly framed official qualification found in most doctors' offices. Moreover, in America the status of psychiatry is higher than its proved usefulness merits. How far do factors such as these create barriers to free communication between doctors and patients? How honest are we in admitting our limitations to our patients, nursing staffs, etc., and how readily do we turn to them for help? To give a simple illustration, how often is the wrong patient sent from an open to a closed ward in

[1] Read at the 111th annual meeting of The American Psychiatric Association, Atlantic City, N. J., May 9-13, 1955.

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an attempt to resolve a tense ward situation? The fact is that we do not know and unless we attempt to analyze the disturbance we cannot find out. Such an analysis will usually involve the whole ward community and may be difficult or impossible to carry out without free communication between patients and staff and between the individual members in both groups. If, however, it is possible to institute a ward meeting and to achieve some degree of communication it may be possible to learn a great deal about the patients' feelings, their attitudes toward the staff, and so on. It has been our conscious aim to develop the freest possible communication between patients and staff and this has necessitated a reorganization of the doctors' timetable. Increasingly less time has been spent in individual interviewing and proportionately more in group and community meetings so that at present ⅓ of the day is spent in the former and ⅔ in the latter. A group meeting usually comprises about 10 patients, a psychiatrist, and several members of the nursing staff. These meetings are run on analytic lines but techniques vary with the personality and training of the psychiatrist. Every patient attends his group meeting (one hour) daily. By a community meeting we mean a discussion group involving the entire population of the unit (100 patients of both sexes, 4 psychiatrists, 1 psychiatric social worker, 1 psychologist, 1 social anthropologist, 4 workshop instructors, and a nursing staff of 15).

A community meeting epitomizes the function of a therapeutic community. The aim is to achieve the freest possible expression of feeling by both patients and staff. This is a departure from the usual role of staff members in the familiar therapeutic group of 8 to 12 persons. In the latter it is the patients only who verbalize their feelings and the staff use such communications as seem therapeutic but do not reveal (at least not intentionally) anything of their own feelings. In a community meeting the staff are free to verbalize their own anxieties where they relate to the community, *e.g.*, the growing hostility of the hospital authorities and local residents to the drunken behavior of certain patients. This threat may have been unknown to the patients but is now fed back to the total community by the staff. The community is thus faced by a social problem which has meaning for everyone. It has taken us 8 years to arrive at the point where the patients no longer attempt to sidestep their responsibility in tackling both the therapeutic and administrative aspects of such a problem in collaboration with the staff. The meaning of the individuals' need to turn to alcohol is the major problem and can be discussed as a current event with the other patients who participated in the outing. This can be implemented by further communications from the patients' own doctors, the P.S.W., members of their groups, and so on. Moreover, the timing of a particular alcoholic "binge" can often be seen in response to some current tension, say a general feeling of antagonism to the supposedly authoritarian behavior of certain staff members or to a state of unresolved tension in the staff members themselves. This in turn may uncover some of the deeper feelings of antagonism toward parental figures and highlight some of the transference or counter-transference difficulties. Thus the emphasis may be on uncovering therapy, on group dynamics, on education, or it may become clear to some staff members or patients that at least one factor in the situation is a response, often unconscious, by patients to unresolved staff tensions. In the latter eventuality the current practice is to postpone discussion of this tension to a later staff meeting, but we feel that a time may soon arrive when such discussion will constantly occur in the presence of the patients themselves. Already we are aware of the extraordinary sensitivity of some patients to such tensions and the probable advantages in accepting their participation, as we do in dealing with patient problems. We have already gone some way in this direction by admitting freely that the staff frequently display neurotic defenses and have casualties luckily only of a minor kind. These neurotic manifestations are usually commented on by the patients and when my own emotional difficulties begin to get out of control the patients show a most touching solicitude and desire to treat me, or an obvious pleasure in my discomfiture, depending on the particular patient! Someone will probably be heard to say that it is time I talked about my difficulties or more specifically that I have a work problem! In addition, the pa-

tients are fully aware that we have frequent staff meetings to deal with our own group and interpersonal tensions. Thus we are patently at one with them in constantly needing treatment. The only reason for separating the two treatment areas (patients and staff) is to give the patients the feeling that our difficulties refer to immediate problems particularly in the field of learning, *e.g.*, the training of new staff members and are not of such magnitude as to warrant the term "illness." Clearly patients want to feel that the staff can cope with their own problems, if they are going to be able to treat them competently, so it is probably better to hold staff groups separately until such time as community techniques have reached the point of perfection when patients can safely be told the whole truth.

The community meeting is a sort of general feed-back and clearing house for current problems from both patients and staff. A problem relating specifically to a particular subgroup, say a workshop or a ward, may be left for later discussion by the particular subgroup. More often, however, it will touch off a more general problem and lead to an immediate discussion. Sometimes the community's current anxiety centers around a particular patient and the whole hour is spent in discussing this patient. It may be that the patient is acting out in so disturbing a way that a decision must be made about his possible transfer to a mental hospital where there are adequate facilities for the supervision of individual patients.

Take the case of an adolescent behavior problem in a girl who has been resorting to excessive amounts of Benzedrine by eating the contents of inhalers that she can buy in any chemist's shop in England. In addition to this, she set fire to a roller towel in the kitchen of her ward. The cause of the fire was at first unknown and it was only as a result of various group meetings that the factors became known and could be fed back into the community meeting. In working through many aspects of this girl's problem—her early rejection, her illegitimacy, orphanage upbringing, the development of her criminal activities, etc.—the whole community became involved and informed about her problem in some depth. She was able to say why she wanted to burn down the hospital and needed to take Benzedrine; that she hated her doctor and could not communicate with him in individual interviews because he reminded her of the magistrate who had sent her to a corrective institution. Moreover, it soon became clear that no matter how kind the community might be the only real friends she had ever known belonged to the criminal fringe and she felt almost as strong a desire to return to them as to get well.

This type of problem involving adaptation to a new set of values and the whole concept of health is probably best handled in the community where many other patients are preoccupied with similar problems bearing on social values.

The constant verbalization of problems and working them through in daily group and community meetings lead to the development of a rather sophisticated and articulate community. Visitors are constantly surprised by the patients' understanding and insight in handling their problems in collaboration with the staff. Social attitudes come in for frequent discussion, *e.g.*, such problems as informing, discipline, etc., which have such sinister associations for patients—many of whom have been in prison—and have obvious importance in relation to the establishment of free communications, as do the various attitudes patients adopt toward the general topic of "treatment." How many patients in psychiatric hospitals have clear ideas on this subject? One is tempted to ask the same question in relation to hospital staffs. To staff members who are prepared to recognize this problem we can recommend the advantages of discussing the topic in community with the patients. A surprising amount of mutual education can result. The trained staff member is forced to review some of his traditional attitudes and is unable to retreat to his safe position of omnipotent silence. For instance, in most psychiatric hospitals sedatives are used in large amounts. Stimulated by the frequently occurring problem of drug addiction and the tensions produced by the "acter-outers" in demanding sedatives from the night staff, we have found it necessary to discuss this problem on many occasions. The community has slowly changed its attitude until it is now accepted by everyone that our previous practice of giving sedatives was in the main a defense against difficulties (both patient and staff) which were much better dealt with by verbalization or other forms of acting out in the group or community meetings. Little distinction is made by the patients between the use of sedatives and of alcohol. The latter is seen in the

main as a regressive symptom of the patient whereas sedation is seen as a symptom in this case not only confined to the patient but frequently involving the staff as well. The staff's need to give sedatives has been freely discussed and was seen to reflect the anxieties of doctors and nurses at least as much as it was used as a specific therapeutic procedure. I know of only one other hospital where the use of sedatives has been discontinued and this again was the result of a careful analysis of the staff motivations in prescribing drugs.

We have developed another community technique which gives us some insight into the patients' attitude toward treatment and the unit generally. Every Friday morning we have a 2-hour seminar with any professional visitors who care to attend. The majority of the staff is present and the patients are represented by 8 different volunteers each week. The average number of visitors is 20 and we avoid any temptation to structure the meeting. The usual pattern is that the patients start talking about their current tensions or seek information about the visitors, their particular professions, reasons for studying the unit, and so on. As the visitors are drawn from the social science and medical fields they may well touch off some controversy, *e.g.*, between probation officers and patients with an antisocial background. The patients are frequently openly hostile to the unit or staff members; this draws the staff into the discussion and the situation becomes very similar to the daily community meetings. Usually, however, at some point the visitors' need for specific information leads the patients to express their own views about treatment, the social organization of the unit, and similar subjects. In this way we learn a great deal from the interdisciplinary seminar and not only can test the patients' concept of the unit culture but can learn something of the reaction of trained outsiders.

There is nothing particularly new in the concept of a therapeutic community. John Wesley had something like this in mind when he formed his "bands" some 200 years ago. The field of juvenile delinquency has produced experiments like those of Aichorn(3), Bettelheim(4), and Redl(5), and it is not pure chance that our own recent experience has been largely in the field of "adult delinquents" or the "acting-out disorders." I feel strongly that we psychiatrists have largely failed to meet the treatment challenge of the antisocial patient, whatever his classification. These patients need specially trained staff and a therapeutic community if their antisocial attitudes are to be modified. To the best of my knowledge the social rehabilitation unit at Belmont Hospital is the only one of this kind with the possible exception of some prison communities. I have deliberately left any mention of the antisocial patient to the end and avoided writing specifically about this problem, as there seems to be an equally good case for the application of the general principles of a therapeutic community in most, if not all, psychiatric hospitals.

Thanks to the courtesy of Professor Bob Matthews, I was able to spend the month of February 1954 visiting the department of psychiatry at Louisiana State University, and also several of the state mental hospitals. This experience has been reported elsewhere (6) but briefly it helped to confirm my impression that many of the principles of a therapeutic community are equally relevant to a psychiatric hospital and social rehabilitation unit such as ours.

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ISAAC RAY AND THE TRIAL OF DANIEL M'NAGHTEN

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Many have paid high tribute to the influence of Isaac Ray as a pioneer in forensic psychiatry and to the fame of his book, *A Treatise on the Medical Jurisprudence of Insanity*, published in 1838(1). However, there does not seem to be any report of the most interesting of all the many approbations which have been showered upon that famous early American psychiatrist.

I refer here to the fact that in the most important sanity trial of all time, the case of Daniel M'Naghten,[2] this book of Doctor Ray's was used with most telling effect by the defense counsel, Alexander Cockburn.

The M'Naghten trial for the murder of Edward Drummond, secretary to Sir Robert Peel, opened on Friday, March 3, 1843, at the Old Bailey Criminal Court. The presiding judge was Sir Nicholas Conyngham Tindal, Lord Chief Justice of Common Pleas. Assisting him were Justices Williams and Coleridge(2). A measure of the importance of the trial is given by the presence of Albert, Prince Consort of Queen Victoria, on the bench as an observer(3). It was Lord Chief Justice Tindal who later delivered and probably had the principal share in the formulation of the famous M'Naghten Rules (4).

The Solicitor General, Sir William Webb Follett, opened the prosecution with a description of the facts of the crime and then discussed in considerable detail the laws of criminal insanity as they had been traditionally formulated in the English courts. He placed particular emphasis upon the legal doctrines of Sir Matthew Hale: "We are generally in the habit of referring to one of the celebrated text writers upon the subject —Lord Hale, who lays down the difference between that state of insanity which excuses crime, and that which does not excuse it." Hale wrote in the latter part of the seventeenth century, but the authoritative edition of his *Pleas of the Crown* was not actually published until 1736(5). Although Hale was certainly a very great legal authority, his opinions on the influence of the moon on insanity(6) and his conduct of the witchcraft trial of 1664(7) are not to his credit. However, at the time of the M'Naghten trial, in 1843, Hale was certainly *the* legal authority on mental disease.

In contrast to the traditional, conservative arguments of the Solicitor General, the defense counsel, Alexander Cockburn, in his speech to the jury the following day, Saturday, March 4, 1843, approached the case with an eloquent and presuasive, but at the same time wholly logical and scientific, analysis of M'Naghten's mental condition and its relationship to the crime. Particularly it is his references to Isaac Ray that interest us here.

Cockburn addressed the Court and the jury:

> May it please your Lordships—Gentlemen of the Jury—I rise to address you on behalf of the unfortunate prisoner at the bar, who stands charged with the awful crime of murder, under a feeling of anxiety so intense—of responsibility so overwhelming that I feel almost borne down by the weight of my solemn and difficult task. . . . Gentlemen, my learned friend [the Solicitor-General], in stating this case to you, anticipated, with his usual acuteness and accuracy, the nature of the defence which would be set up. Most unquestionably, it is no part of my duty to attempt to conceal for an instant the main question upon which your decision will turn. I am not here to deny that the hand of the prisoner was raised against the deceased. The defence upon which I shall rely will turn, not upon the denial of the act with which the prisoner is charged, but upon the state of his mind at the time he committed the act. . . . I shall call before you members of the medical profession—men of intelligence, experience, skill, and undoubted probity—who will tell you upon their oaths that it is their belief, their deliberate opinion, their deep conviction, that this man is mad, that he is the creature of delusion, and the victim of ungovernable impulses, which wholly take away from him the character of a reasonable and responsible being. . . . I think it will be quite impossible for any person, who brings a sound judgment to bear upon this

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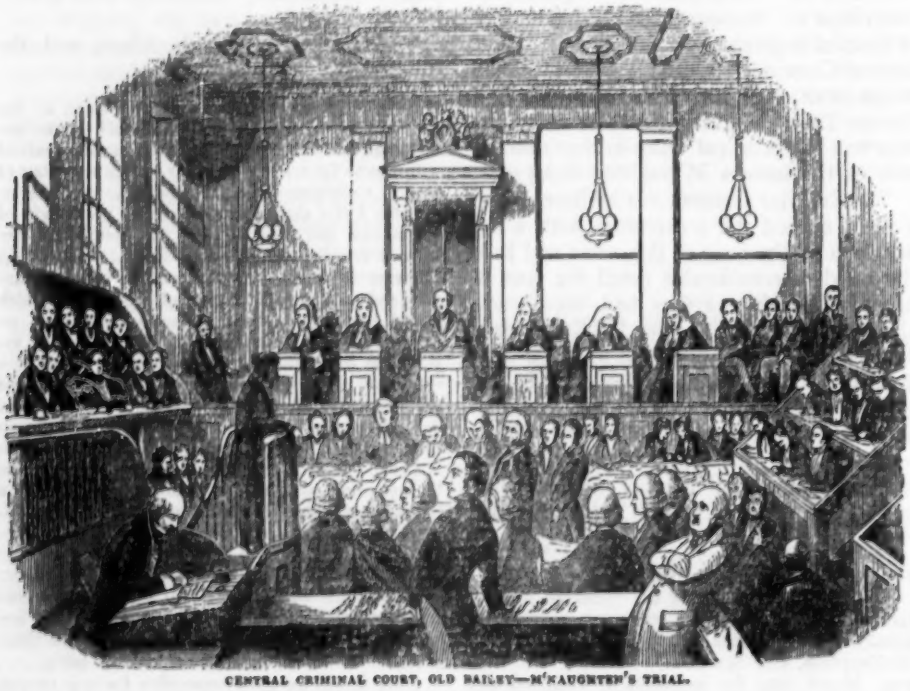
[2] *M'Naghten* seems to be the preferred modern spelling of this name. Contemporary accounts usually use other spellings such as *M'Naughton, McNaughten*, etc. See this JOURNAL, Vol. 110, p. 705, March 1954, for comments by Diamond and by Overholser concerning this.

subject, when viewed with the aid of the light which science has thrown upon it, to come to the opinion that the ancient maxims, which, in times gone by, have been laid down for our guidance, can be taken still to obtain in the full force of the terms in which they were laid down. It must not be forgotten that the knowledge of this disease in all its various forms is a matter of very recent growth. . . . You can easily understand, gentlemen, that when it was the practice to separate these unhappy beings from the rest of mankind and to subject them to this cruel treatment, the person whose reason was but partially obscured would ultimately, and perhaps speedily, in most cases, be converted into a raving madman. You can easily understand, too, that, when thus immured and shut up from the inspection of public inquiry, neglected, abandoned, overlooked—all the peculiar forms, and characteristics, and changes of this malady were lost sight of and unknown, and kept from the knowledge of mankind at large, and therefore how difficult it was to judge correctly concerning it. Thus I am enabled to understand how it was that crude maxims and singular propositions founded upon the hitherto partial knowledge of this disease, have been put forward and received as authority, although utterly inapplicable to many of the cases arising under the varied forms of insanity. Science is ever on the advance; and no doubt, science of this kind, like all other, is in advance of the generality of mankind. . . . I think, then, we shall be fully justified in turning to the doctrines of matured science rather than to the maxims put forth in times when neither knowledge, nor philanthropy, nor philosophy, nor common justice, had their full operation in discussions of this nature. My learned friend, the Solicitor-General, has read to you the authority of Lord Hale upon the subject matter of this inquiry. I hold in my hand perhaps the most scientific treatise that the age has produced upon the subject of insanity in relation to jurisprudence—it is the work of Dr. Ray, an American writer on medical jurisprudence, and a professor in one of the great national establishments of that country. Dr. Ray has considered the subject of my present observations, and in speaking of it he says, at the very beginning of his work, "Statutes were framed and principles of law laid down regulating the legal relations of the insane, long before physicians had obtained any accurate notions respecting their malady; and, as might naturally be expected, error and injustice have been committed to an incalculable extent, under the sacred name of law. The actual state of our knowledge of insanity, as well as of other diseases, so far from being what it has always heretofore been, is the accumulated result of the observations which, with more or less accuracy and fidelity, have been prosecuted through many cen-



CENTRAL CRIMINAL COURT, OLD BAILEY—M'NAUGHTEN'S TRIAL.

FIG. 1.—Contemporary wood-cut of the trial. From the *Illustrated London News*, March 4, 1843.

turies, under the guidance of a more or less inductive philosophy. In addition to the obstacles to the progress of knowledge respecting other diseases, there has been this also in regard to insanity, that being considered as resulting from a direct exercise of Divine power, and not from the operation of the ordinary laws of nature; and thus associated with mysterious and supernatural phenomena, confessedly above our comprehension, inquiry has been discouraged at the very threshold, by the fear of presumption, or at least of fruitless labour." Such are the introductory observations of this able writer on this subject. He goes on to say, touching the doctrine of Lord Hale—"Though little of pertinacious adherence to merely technical distinctions is observed in the application of the law to criminal cases," (he had previously been commenting on certain technical distinctions which prevail in the law as to insanity in civil matters,) "yet there is much of the same respect for antiquated maxims, that have little else to recommend them but their antiquity, and are so much the more pernicious in their application, as the interests of property are of

A

TREATISE

ON THE

MEDICAL JURISPRUDENCE

OF

INSANITY.

BY I. RAY, M. D.

BOSTON:
CHARLES C. LITTLE AND JAMES BROWN.

M.DCCC.XXXVIII.

FIG. 2.—Title-page of the first edition of *The Medical Jurisprudence of Insanity*.

less importance than reputation and life. It by no means follows that a person declared to be *non compos* by due process of law, is to be considered on that account merely to be irresponsible for his criminal acts. This is a question entirely distinct, and is determined upon very different views of the nature of insanity, and of its effects upon the operations of the mind; and here it is that the lawyer encroaches most on the domain of the physician. The first attempt to point out precisely those conditions of insanity in which the civil and criminal responsibilities are unequally affected, was made by Lord Hale." Then he quotes from Lord Hale a passage you heard read yesterday: "1. There is a partial insanity of the mind; and, 2. a total insanity. The former is either in respect to things *quoad hoc vel illud insanire*—some persons that have a competent use of reason in respect of some subjects are yet under a particular *dementia* in respect of some particular discourses, subjects, or applications: or else it is partial in respect of degree; and this is the condition of very many, especially melancholy persons, who, for the most part, discover their defect in excessive fears and griefs, and yet are not wholly destitute of the use of reason: and this partial insanity seems not to excuse them in the committing of any offence for its matter capital; for, doubtless, most persons who are felons of themselves, and others, are under a degree of partial insanity. It is very difficult to determine the indivisible line that divides perfect and partial insanity; but it must rest upon circumstances duly to be weighed and considered, both by judge and jury, lest, on the one side, there be a kind of inhumanity towards the defects of human nature; or, on the other side, too great an indulgence given to great crimes. The best measure that I can think of is this: such a person as labouring under melancholy distempers hath yet ordinarily as great understanding as ordinarily a child of fourteen years hath, is such a person as may be guilty of treason or felony." Having quoted that passage, he says, "The docrines thus dogmatically laid down by Lord Hale have exerted no inconsiderable influence on the judicial opinions of his successors; and his high authority has always been invoked against the plea of insanity whenever it has been urged by the voice of philanthropy and true science. If, too, in consequence of the common tendency of indulging in forced and unwarrantable constructions whenever a point is to be gained, his principles have been made to mean far more than he ever designed, the fact impressively teaches the importance of clear and well-defined terms in the expression of scientific truths, as well as of enlarged practical information relative to the subjects to which they belong. In the time of this eminent jurist, insanity was a much less frequent disease than it now is, and the popular notions concerning it were derived from the observation of those wretched inmates of the mad-houses whom chains and stripes, cold and filth, had reduced to the stupidity of the idiot, or exasperated to the fury of a demon. Those nice shades of the disease in which the mind, with-

out being wholly driven from its propriety, pertinaciously clings to some absurd delusion, were either regarded as something very different from real madness, or were too far removed from the common gaze, and too soon converted by bad management into the more active forms of the disease, to enter much into the general idea entertained of madness. Could Lord Hale have contemplated the scenes presented by the lunatic asylums of our own times, we should undoubtedly have received from him a very different doctrine for the regulation of the decisions of after generations.". . . This, gentlemen, is one of the cases in which this most able writer on Medical Jurisprudence, combining with great reasoning powers and general scientific knowledge, his own personal experience as a physician, and taking the most enlightened view of the subject, not with a mawkish and sentimental, but with a manly and sound philosophy, considers that the doctrines laid down when the subject was not sufficiently apprehended and understood, have led to the fatal results in the administration of justice(8).

Although Cockburn goes on to mention other authorities, both medical and legal, in no instance does he give them the prominent position in his arguments that he accords to Isaac Ray. Again and again, in reviewing each of the famous preceding insanity trials: Arnold in 1724, the Earl Ferrers case in 1760, Hadfield in 1800, and Bellingham in 1812; he quotes Ray's evaluation of the medical and legal merits of each case. Clearly enough Cockburn builds the entire theoretical side of his defense arguments upon the American psychiatrist's opinions. When one realizes the provincial quality of English legal tradition, together with the fact that Ray's book was only a few years off the press and Ray was by no means as yet a prophet in his own land, the effectiveness of this defense tactic is truly remarkable.

REPORT

OF THE

TRIAL OF DANIEL M'NAUGHTON

AT THE

Central Criminal Court,

OLD BAILEY,

(ON FRIDAY, THE 3d, AND SATURDAY, THE 4th OF MARCH, 1843,)

FOR THE

WILFUL MURDER

OF

EDWARD DRUMMOND, ESQ.

BY

RICHARD M. BOUSFIELD,

OF THE HONOURABLE SOCIETY OF GRAY'S INN, STUDENT AT LAW;

AND

RICHARD MERRETT,

SHORTHAND WRITER.

LONDON:

HENRY RENSHAW, 356, STRAND.

SOLD BY MACLACHLAN, STEWART, AND CO., EDINBURGH;

AND FANNIN AND CO., DUBLIN.

1843.

FIG. 3.—Title-page of the first edition of the trial report.

Then followed the testimony of the medical witnesses, who were all in accord with the contentions of the defense. Lord Chief Justice Tindal seemed particularly impressed by the testimony of two medical witnesses, Aston Key, Surgeon of Guy's Hospital, and Forbes Winslow, author of a then well-known book on criminal insanity, *Plea of Insanity in Criminal Cases*. Neither witness had actually examined M'Naghten, but had only observed him during the trial.

The Lord Chief Justice inquired whether the prosecution had any opposing medical testimony to offer and, when informed that there was none, he stated(9):

> We feel the evidence, especially of the last two gentlemen who have been examined, and who are strangers to both sides, and only observers of the case, to be very strong, and sufficient to induce my learned brother and myself to stop the case.

As instructed, the jury found the prisoner "Not guilty, on the ground of insanity."

On reading the complete trial record of the M'Naghten case, one is impressed by the atmosphere of fairness and calm, judicial inquiry, and the courteous treatment of the many witnesses by both the prosecution and the defense. The defense called to the witness stand no fewer than nine physicians and surgeons, all of whom testified that M'Naghten was legally insane. There was no contradictory medical testimony in the manner of the "battle of experts" which has plagued most subsequent insanity trials.

The M'Naghten case was truly the first trial in which the authority of medical science

was directly pitted against ancient legal authority. In the famous Hadfield trial of 1800, there was much involved discussion of just what constituted legal insanity. The counsel for the defense, Lord Erskine, did succeed in thrusting aside the old, established concepts of "total depravity" and won an acquittal for his client, but this was accomplished through the extraordinary eloquence and legal ingenuity of the counsel, rather than by the weight of medical evidence(10).

The Solicitor General was not overzealous in his prosecution of M'Naghten (perhaps because the two physicians appointed by the Crown to examine the prisoner quite obviously felt that he was insane; hence they were not called to testify). After Sir Nicholas Tindal interrupted the presentation of evidence, the Solicitor General did feel called upon to justify his prosecution(11):

> On the part of the Crown, I felt it my duty to lay before you the evidence we possessed of the conduct of this young man. I cannot agree with the observations my learned friend [Mr. Cockburn] has made on the doctrines and authorities that have been laid down in this case, because I think those doctrines and authorities are correct law. [But he does agree that] after the intimations I have received from the Bench, I feel that I should not be properly discharging my duty to the Crown and to the public, if I asked you to give your verdict in this case against the prisoner. . . . I cannot press for a verdict against the prisoner.

The acquittal of M'Naghten led to severe and totally unjustified criticisms in contemporary newspapers(12, 13). Even Queen Victoria wrote a letter to Sir Robert Peel protesting the decision(14). The public simply refused to believe that the assassination had been the result of mental illness. M'Naghten had killed Drummond under the mistaken impression that he had assassinated the Prime Minister, Sir Robert Peel. Political tempers were at a very high pitch at the time, because of the turmoil over the Anti-Corn Laws. The assassination was regarded by almost everybody as a political plot of the opposition party. It was said, "If M'Naghten is crazy, he is crazy over politics"(15). In actuality, M'Naghten had no connection whatsoever with any of this political strife. His complaints against the Prime Minister involved only his own paranoid delusions, and evidently M'Naghten was totally unaware of the over-all political situation at the time.

Much of this public criticism was directed against Sir Nicholas Tindal for having stopped the trial and having directed a verdict of acquittal. However, Alexander Cockburn received only credit and fame for his eloquent defense of M'Naghten, once the turmoil had subsided. In 1850 he was appointed Solicitor General, and was knighted. The following year Sir Alexander became Attorney General, and in 1859 he was appointed Lord Chief Justice of the Queen's Bench(16).

It is safe to say that never since, in an English or an American courtroom, has a scientific work by a psychiatrist been treated with such respect as was *The Medical Jurisprudence of Insanity*. Out of the public and parliamentary indignation over M'Naghten's acquittal came the celebrated *Opinion of the Judges*, and the resulting so-called M'Naghten Rules superseding all earlier legal tests, have, since 1843, constituted the essential criteria for determining criminal responsibility or irresponsibility in all English-speaking countries. Of late they have been brought under considerable criticism, especially in the United States.

Daniel M'Naghten was confined in Bethlem Hospital. There is an entry in his hospital record, dated March 21, 1854:

> He is a man of so retiring a disposition and so averse to conversaton or notice of any kind that it is very difficult even for his attendant to glean from him any information as to his state of mind or the character of his delusions, but one point has been made, that he imagines he is the subject of annoyance from some real or fanciful being or beings; but more than this is not known for he studiously avoids entering into the subject with anyone. If a stranger walks through the gallery, he at once hides in the water closet or in a bedroom, and at other times he chooses some darkish corner where he reads or knits. His crime created great commotion at the time. In mistake for the late Sir Robert Peel he shot Mr. Drummond as he was going into the Treasury or some Government Office and at that time imagined that the Tories were his enemies and annoyed him. He has refused food and been fed with the stomach pump.

On March 26, 1864, when the new Broadmoor Institution for the criminally insane

was opened, M'Naghten was transferred there. The entry note on March 28 reads:

A native of Glasgow, an intelligent man, states that he must have done something very bad or they would not have sent him to Bethlehem; gives distinctly the Sentence of the Chief Justice, "Acquitted on the ground of Insanity, to be confined during Her Majesty's Pleasure." When asked whether he now thinks that he must have been out of his mind he replies, "Such was the verdict, the opinion of the Jury after hearing the evidence."

M'Naghten was by this time in feeble physical health, "has extensive heart disease and kidney disease," and he died quietly at 1:10 a.m. on May 3, 1865(17).

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CASE REPORT

HYPOTHERMIA FOLLOWING RESERPINE[1]

STEPHEN B. PAYN, M.D., NEW YORK CITY

Although reserpine was found to reduce the body temperature of animals[2], no similar effect has been reported in man. The following case will therefore be of interest.

A 67-year-old white woman with diabetes and decompensated hypertensive cardiovascular disease was admitted to the Psychiatric Institute of Grasslands Hospital on January 10, 1955, in a state of agitated depression.

Physical examination revealed an acutely ill woman, dyspneic and slightly cyanotic. Rectal temperature was 98.6° F., pulse rate, 100 per minute, and blood pressure, 180/80 mm. of mercury. The heart was enlarged to the left on percussion. A loud, blowing systolic murmur was heard best in the posterior axillary line. The second pulmonic sound was accentuated. There was evidence of pulmonary congestion and peripheral edema.

Laboratory Data.—Urine contained albumen and sugar, many leucocytes and erythrocytes, and B. coli on culture. Blood sugar ranged between 345 and 172 mgs. per 100 cc. Non-protein nitrogen was 43 mgs. per 100 cc. Regitine test for pleochromocytoma was negative.

Mental Status.—The patient was agitated and depressed. She screamed, resisted nursing care, and refused to eat.

Course in the Hospital.—She received 5 mgs. of reserpine intramuscularly on the day of admission and 1 mg. orally the next morning, followed by 5 mgs. intramuscularly 4 hours later. After the intramuscular dose the patient calmed down, ate her supper with fairly good appetite, and joined the other patients. Five hours after the injection she was found in a state of collapse. Blood pressure was 70/50 mm. of mercury; temperature, 94.4° F. After 0.25 gm. of caffeine sodium benzoate and an intravenous infusion she regained consciousness and blood pressure returned to a normal level. Her temperature, however, continued to fall and was between 93° and 93.8° for several hours. Pulse rate was in the range of 60 to 80 per minute.

The next day the patient had another collapse with a blood pressure drop to a level where it could not be measured. Improvement occurred with ephedrine. In the meantime, the temperature had risen to 96.2° and continued to rise (see Fig. 1). During the following days it gradually became stabilized around 98° while the blood pressure fluctuated between 130 and 218 mm. systolic and between 50 and 100 diastolic. Serial electrocardiograms showed no evidence of myocardial infarction.

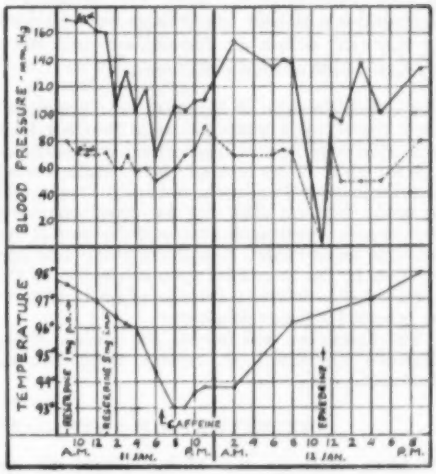

FIG. 1.—Record of Temperature and blood pressure.

The diabetes was controlled without insulin. Therapy prior to and concomitant with reserpine consisted of meralluride (Mercuhydrin), digoxin, penicillin, streptomycin, theophylline with ethylenediamine (Aminophyllin), and one injection of morphine and scopolamine. The patient was transferred to another hospital 10 days after admission. A follow-up 8 months later revealed that during that period her temperature had ranged between 98° and 98.6° and that no further episodes of hypothermia had occurred. She had not received any more reserpine.

Why, in spite of the wide use of reserpine, no other cases of hypothermia have been reported, is a question open to speculation. It is conceivable that a combination of circumstances is necessary for the development of hypothermia, as appeared to be the case with this patient. It may also be that not enough attention has been paid to the possibility of a drop in temperature during reserpine therapy.

[1] From the Psychiatric Institute of Grasslands Hospital, Valhalla, New York.

[2] *See* Bein, H. J., Experientia, 9:107, 1953; and Plummer, A. J., et al., Ann. N. Y. Acad. Sc., 59:8, April 30, 1954.

REPORT OF THE COMMITTEE ON CERTIFICATION OF MENTAL HOSPITAL ADMINISTRATORS

The Committee on Certification of Mental Hospital Administrators of The American Psychiatric Association met in Washington, D. C., October 1-2, 1955. The Rules and Regulations of this Committee were revised by Council action on November 5-6, 1955, by the addition of the following:

Any candidate who is accepted for examination shall report for examination at a time not later than two years from the date of the first examination for which he has been scheduled. Failure to report for examination during this period will automatically void his eligibility for examination and will require a new application and payment of application fee of $50.00. Exceptions to this rule may be made by the Committee upon submission by the applicant of satisfactory evidence of his inability to be present for the examination.

The Committee will furnish, for a fee of $5.00, duplicate certificates to replace those lost or destroyed.

Applicants are again notified that the final date for filing applications for Class I certification is July 1, 1958.

The closing date for the receipt of applications for the next examination is March 1, 1956. This examination will be held April 28-29, 1956, in Chicago, immediately prior to the annual meeting. Please address all inquiries and applications to the Secretary, C. N. Baganz, M. D., Veterans Administration Hospital, Lyons, New Jersey.

At its meeting October 1-2, 1955, the Committee examined and certified as Qualified Mental Hospital Administrators the subjoined list of candidates.

WINFRED OVERHOLSER, M. D.,
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SPEECH

Custom is the most certain mistress of language, as the public stamp makes the current money. But we must not be too frequent with the mint, every day coming. Nor fetch words from the extreme and utmost ages; since the chief virtue of a style is perspicuity, and nothing so vicious in it as to need an interpreter. . . . Yet when I name custom, I understand not the vulgar custom: For that were a precept no less dangerous to language, than life, if we should speak or live after the manners of the vulgar: But that I call custom of speech, which is the consent of the learned; as custom of life, which is the consent of the good. . . . We must express readily, and fully, not profusely. There is difference between a liberal and a prodigal hand.

—BEN JONSON

THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

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NEUROLOGY

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* Denotes supplementary certification.

CORRESPONDENCE

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I wish to raise the question whether the glowing reports and unbridled publicity about the new "wonder drugs," especially reserpine and chlorpromazine, are not a serious disservice. Repeatedly I run across statements to the effect that many state hospitals have almost given up electroconvulsive therapy (and insulin therapy) in favor of these new drugs.

I believe it is a fair statement that, despite the state hospital fanfare, these new agents do not as a rule produce the marvelous results in the treatment of private patients, which are so commonly reported from the state hospitals. Specifically, there are private practitioners, such as this writer, who find that these drugs are usually no substitute for electroconvulsive therapy. Reserpine, I believe, is generally of no value in treating depressions, and in fact may make the condition much worse. In the case of chlorpromazine in the treatment of depression, its value seems to me to be that of an adjuvant, which is useful in replacing and potentiating other sedatives, particularly barbiturates.

The main point of this communication is to express the opinion that, because of the publicity about these new drugs, many depressed patients are not receiving proper treatment. I think I can safely say that almost all depressed patients whom I see now have received long and ineffective courses of reserpine or chlorpromazine or both.

LAWRENCE H. GAHAGAN, M. D.,
New York City.

HUNCHES

Another example I may cite [of hunches during wakeful periods at night] was the interpretation of the significance of bodily changes which occur in great emotional excitement, such as fear and rage. These changes—the more rapid pulse, the deeper breathing, the increase of sugar in the blood, the secretion from the adrenal glands—were very diverse and seemed unrelated. Then, one wakeful night, after a considerable collection of these changes had been disclosed, the idea flashed through my mind that they could be nicely integrated if conceived as bodily preparations for supreme effort in flight or in fighting. Further investigation added to the collection and confirmed the general scheme suggested by the hunch.

—WALTER B. CANNON

COMMENT

STATE OF LEGAL ABORTION IN DENMARK

The problems concerning induced abortion in Denmark have undergone an interesting development during the last 15-20 years.

The first legislation dealing with surgical abortion was passed in 1939. Up to that time surgeons were allowed in emergency cases to practice abortion to avoid danger to the life or health of the woman.

The legislation of 1939, in a few words, stated that a woman might be permitted therapeutic abortion to prevent a critical danger to life or health due to disease, or in some degree to other conditions of social nature. This is termed *extended medical indication.*

Therapeutic abortion was also allowed after certain sexual crimes (*ethical indication*) or in cases of severe hereditary taint (*eugenic indication*).

The procedure was permitted only in a public hospital. (In Denmark there are very few private hospitals.) Two physicians had to agree on the indication, and the case had to be reported to the public health service.

Since this law was adopted, the number of legal abortions has risen from 500 to 5,000 yearly. (Denmark has a population of over 4 million.) The increase is essentially among married women, especially in psychiatric cases, and from outside Copenhagen. Only a few unmarried women have had legal therapeutic abortions, probably because the public and private welfare gives these women better opportunity to be helped effectively.

It is difficult to estimate if the number of illegal abortions during the same period has decreased or increased, but in any case the number is very high, perhaps 12,000 yearly. Abortions treated in hospitals, including legal and post-illegal as well as spontaneous cases, amount to 17% of all pregnancies (about 6% from spontaneous abortions, 6% from post-illegal, and, 5% from legal abortions). And perhaps there are 6% further illegal abortions not hospitalized.

The legislation of 1939 was not clear and could be interpreted in different ways. The law therefore has been clarified by a commission appointed by the ministry of justice; the resulting modifications are now passing the parliament. The following two points are of special interest: (1) clarification of the indications; (2) the procedure by indications.

Indications.—According to the bill now proposed there will be no changes in the ethical and eugenic indications. The medical indications will not be extended but made clearer as follows: "A woman is allowed to have her pregnancy interrupted when it is needed to prevent serious danger to the life and health of the woman. The judgment of this depends on (1) present physical or mental illness; (2) threatening physical or mental weakness; (3) the social circumstances under which the woman has to live.

The law demands as a condition to interruption that no other solution to the problem is possible, as for example, psychotherapy in time to solve the dilemma.

We in Denmark feel it very important to judge the situation as a whole, in order that not one single symptom should dominate the picture, but that the general social condition of the patient should be considered as well. In psychiatric conditions we take into account not only depressions and suicidal tendencies but also nervous exhaustion and psychasthenia, especially where there are already many children.

The Procedure.—Where the indication is adjudged properly to be disease the chief physician of a public hospital department may take the affirmative decision. When the indication consists of other conditions, the decision must be made by a board of three members, covering a certain part of the country appointed by the ministry of social affairs.

Fourteen such boards are foreseen. This board consists of two physicians, one of whom is a specialist in psychiatry, and the third member is the leader of a special organization called "mothers' help" ("maternity welfare").

This organization is semi-public, originally started to aid pregnant women in different ways. It is staffed by physicians and social workers. The law determines that all pregnant women seeking interruption of pregnancy (aside from cases of illness—see above) must be referred to the "mothers' help," who prepares the case for the board from the medical and social viewpoint.

We feel it very important that the members of the board have the opportunity to see personally all applicants, so that decisions can be made on a personal basis for each case, and "paper decisions" as much as possible are avoided.

In order to coordinate the working policy of these boards a central advisory standing committee is appointed, also consisting of three persons: two physicians, one of them a specialist in psychiatry and one with practical experience in social affairs.

To summarize any viewpoints as to the developments that have taken place, we may say that the liberal legislation of 1939 probably has made possible legal abortion in hospital in a number of cases which without the law would have been performed illegally.

At the same time, however, an increased desire for induced abortions seems to have arisen in the population, a desire not based on social necessity but more likely on a rising demand for better living conditions for the women, and the existence of the law has without doubt in a number of cases caused women to consider induced abortion as an obvious way out of an unwanted pregnancy.

Perhaps the law has thus indirectly resulted in more cases of illegal abortions than it has directly prevented, but on the whole most of the physicians in Denmark would certainly not like to do without this liberalized legislation.

The specialists in psychiatry have had a tremendous load in weighing the indications, but on the whole their views have been followed, a circumstance not ungratifying to the psychiatrists.

CARL CLEMMESEN, M. D.,
Superintendent,
Bispebjœrg Hospital,
Copenhagen.

ORIGIN OF WAR

Next, I ask in what place war was first found, and I disclose to you that it was in Heaven, when our Lord God drove out the angels. He made one of them so beautiful, noble and glorious, that he surpassed in beauty all other celestial beings, and his beauty so shone that it set low all other beauty, just as a great candle burning abases the light of a little candle. And when he saw himself thus noble and beautiful, he thought to mount to the highest place in Heaven, and to set his seat there so as to be like God his Creator. So soon as he had thus determined, war had begun. . . . Hence it is no great marvel if in this world there arise wars and battles, since they existed first in Heaven.

—HONORÉ BONET,
The Tree of Battles (14th Century)

NEWS AND NOTES

PHILADELPHIA CHILD GUIDANCE CLINIC 30TH ANNIVERSARY.—One hundred psychiatrists, psychologists, and social workers who were former Clinic staff members or students, returned to Philadelphia October 29, 1955, to pay tribute to the founders of the Philadelphia Child Guidance Clinic, Dr. Frederick H. Allen, Dr. Phyllis Blanchard, and Miss Almena Dawley. The anniversary celebration included professional meetings and a banquet in the evening.

Several seminars were held covering various aspects of the Clinic's work. Each of the founders, as well as numerous others, presented papers. The contributions of the 3 founders to American child psychiatry have been outstanding. Their work covering a generation was duly recognized and honored at this anniversary meeting.

It is hoped that the proceedings may appear later in monograph form.

SYMPOSIUM ON GERONTOLOGY.—A symposium on problems of the mind among the aged was held on Friday, January 13, in Cincinnati, Ohio, bringing together some of the nation's leading authorities on gerontology. Dr. Maurice Levine, professor of psychiatry, University of Cincinnati School of Medicine, presided. The principle speakers were Dr. Karl M. Bowman, Dr. Franklin Ebaugh, Dr. Edward Weiss, Capt. George N. Raines, M.C., U.S.N., Dr. Freddy Homburger, and Dr. Ewald W. Busse. Dr. Edward J. Stieglitz, Saint Elizabeths Hospital, Washington, D.C., chaired a panel discussion and summed up the symposium.

The Wm. S. Merrell Company, Cincinnati pharmaceutical firm, now devoting approximately half of its research efforts to gerontology, sponsored this second annual gerontological symposium.

AMERICAN ORTHOPSYCHIATRIC ASSOCIATION.—This association will hold its annual meeting at the Hotels Commodore and Roosevelt in New York City, March 15-17, 1956.

Five broad fields will be presented in approximately 65 papers: (1) Schools and mental health, (2) inpatient and outpatient psychiatric treatment of children, (3) adolescence and juvenile delinquency, (4) psychiatric clinic management, (5) adult psychotherapy.

The American Orthopsychiatric Association, founded in 1924, is a membership organization of psychiatrists, psychologists, psychiatric social workers, and members of allied fields, including education, anthropology, and sociology. Members come from all parts of the United States, Canada, and abroad.

Officers for the current year are: Exie E. Welsch, M. D., president; Jules D. Holzberg, Ph. D., vice-president; Jessie Edna Crampton, secretary; William S. Langford, M. D., treasurer; Simon H. Tulchin, past president; directors: Robert Stubblefield, M. D., Alma A. Paulsen, Ph. D., Ralph D. Rabinovitch, M. D., and Mary C. Sumner; editor of the Journal: George E. Gardner, M. D., Boston, Mass.; president-elect: Luther E. Woodward, Ph. D., New York, N. Y.

Inquiries should be directed to Dr. Marion F. Langer, American Orthopsychiatric Association, 1790 Broadway, New York 19, N. Y.

DISPOSITION OF FIRST ADMISSIONS TO A MENTAL HOSPITAL.—Public Health Monograph No. 32, issued by the Department of Health, Education, and Welfare, describes in detail the disposition of first admissions to Warren State Hospital, Warren, Pennsylvania, from 1916 to 1950. Aimed at acquainting public health workers with some of the complex problems faced by mental hospital administrators, this monograph also demonstrates a method for studying the flow of patients through a mental hospital. Finally, it provides a background for discussion of some basic epidemiological and clinical research needed to help interpret the findings, and to formulate public mental health programs directed toward care, treatment, and the prevention of illness and disability.

Compiled by Morton Kramer, Sc. D., Hyman Goldstein, Ph. D., Robert H. Israel, M. D., and Nelson A. Johnson, M. S. W *Disposition of First Admissions to a State Mental Hospital* may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. for 25 cents.

American Academy of Neurology.—Special courses in 9 different neurological subjects will be presented by a selected faculty at the April 1956 meeting of the American Academy of Neurology in St. Louis, Missouri, on April 23, 24, and 25. Three courses will be given daily: Neuropathology, infectious diseases in neurology, clinical electroencephalography and electromyography, convulsive disorders, neurologic disorders of infancy and childhood, neurochemistry, injuries to the nervous system, current advances in neurology. Neurophysiology will require two days. In addition, the Academy will also present a course for general practitioners.

For details, write to Mrs. J. C. McKinley, Executive Secretary, 3501 East 54th Street, Minneapolis 17, Minnesota.

Association for Research in Nervous and Mental Disease.—At the 35th annual meeting of the Association held in New York City on December 9 and 10, 1955, the following officers were elected for the year 1956: president, Dr. Harry C. Solomon; first vice-president, Dr. Stanley Cobb; second vice-president, Dr. Wilder Penfield; secretary-treasurer, Dr. Rollo J. Masselink; assistant secretary, Dr. Lawrence C. Kolb.

Exhibit of Material from Freud's Library.—Dr. Lawrence C. Kolb, director of the New York State Psychiatric Institute, announces that there will be exhibited at the Institute from January 16 through February 10, 1956, a portion of the material held in the Freud Memorial Room of its library. This is the first of such exhibitions to be held by various institutions during 1956, the centenary of Freud's birth.

The exhibition will include copies of the early neurological publications of Freud, copies of the first publications in the field of psychoanalysis, several holograph manuscripts and books by Freud, with their translations into 14 languages, books inscribed by and to Freud, letters written by him with signed documents relating to the Viennese Psychoanalytic Society, also a collection of photographs of Freud. All this material is the property of the library of the psychiatric Institute which holds a considerable part of Freud's original library.

Southern California Psychiatric Society.—The annual scientific meeting of the Southern California Psychiatric Society was held on Saturday, January 28, 1956, at the Hotel Statler in Los Angeles, immediately following the 2-day meeting of the Western Regional Research Conference of The American Psychiatric Association at the Medical Center, University of California, on January 26 and 27. The principal speakers were Lawrence S. Kubie, M. D., and Franz Alexander, M. D.

In the evening a dinner dance was held in the Golden State Room of the Hotel Statler.

Institute on Psychiatric Education.—The Surgeon General of the United States Public Health Service recently awarded a grant of $3,748 to Duke University School of Medicine, acting on behalf of the Association of Southern Professors of Psychiatry, to support an Institute on Psychiatric Education. The Institute was held in Washington, D. C. on December 29 and 30. The emphasis throughout the program was on the first and second years of medical training, and the major topics of discussion were: (1) What is an ideal program? (2) what difficulties and resistances are met in our attempts to approach this ideal? (3) what modification of our present teaching effort should be made to make our program more effective?

Dr. Ewald. W. Busse, Professor and Chairman, Department of Psychiatry, Duke University, and secretary and treasurer of the Association of Southern Professors of Psychiatry is the responsible grantee. Thirty medical schools are in the area represented by the Association. Meetings are held twice a year, and the purpose of the organization is to improve and develop more effective methods of teaching psychiatry. Dr. William

F. Orr, Professor of Psychiatry, Vanderbilt University, is the Chairman for the Conference.

Invalidism in the United States.—The National Health Council (Theodore G. Klumpp, M. D., chairman, 1790 Broadway, New York 19) has compiled estimates indicating that 2 million persons in the United States, that is, 1 in every 6 of the population, suffer from some known physical or mental impairment. Of this number, an estimated 5.3 million have been disabled 3 months or longer. This latter figure is expected to increase to 6.4 million by 1960 and 7.4 million by 1970.

A survey being made by the California State Department of Health indicates that each day an average of 65 of every 1,000 citizens in that state are disabled by illness or injury, ¾ of them by chronic conditions.

Correction.—In the News and Notes of the October issue of this Journal, the item regarding the appointment of Dr. Pasamanick at Ohio State University, should have read: "Dr. Pasamanick Professor of Psychiatry at Ohio State University College of Medicine."

Dr. Ralph M. Patterson is chairman and head of the Department of Psychiatry.

SCIENCE vs. PHILOSOPHY

The nature of philosophy condemns its followers to wander forever in the same labyrinth, and in this circumscribed space many will necessarily fall into the track of their predecessors. . . . Positive science is . . . distinguished from philosophy by the incontestable progress it everywhere makes. The methods are stamped with certainty, because they are daily extending our certain knowledge; because the immense experience of years and of myriads of intelligences confirm their truth, without casting a shadow of suspicion on them. Science, then, progresses, and must continue to progress. Philosophy only moves in the same endless circle. Its first principles are as much a matter of dispute as they were two thousand years ago. It has made no progress, although in constant movement.

BOOK REVIEWS

PSYCHOSOMATIC CASE BOOK. By *Roy R. Grinker, M.D., and Fred P. Robbins, M.D.* (New York: Blakiston, 1954. Price: $6.50.)

The title notwithstanding, this is a book to advance the theory of psychosomatic medicine, and to a lesser degree to expand the nosology. It says nothing new about diagnostic methods nor about psychotherapy. The emphasis of this review, therefore, is on the theory that the authors expound.

It is the avowed intention of the authors "to introduce the reader to the basic principles of psychosomatic approach in medicine by presenting clinical histories of patients suffering with various diseases." The 20 chapters which follow are logically arranged under the headings: I, General Considerations; II, The Problems of Diagnosis; III, Special Syndromes; IV, Therapy and; V, General Summary. Decrying the term *psychosomatic* as seeming to emphasize a dichotomy instead of a unit, the authors propose instead that "the psychosomatic unit as a general concept is applicable operationally only during predifferentiated or dedifferentiated states, that is, during maturation or during pathological regression" (p. 4). In support of this the authors invite the reader to accept certain constructs basic to psychoanalytic theory in order that the logic of their own interpretation of "field theory" falls neatly into place. After reviewing the earlier psychosomatic theories of Sheldon, Dunbar, Alexander, Wolff, and Ruesch, the authors conclude (chap. 2) that "the psychosomatic field must now be considered not as a fractured, disjointed, and isolated series of observational sectors but as a total integrated field which can be studied from many points of view by many disciplines."

The reader unused to psychiatric abstractions may be more bewildered than informed, more annoyed than enlightened, by some of the authors' formulations. In discussing their field theory they see "the living organization as a structure-function" which, they maintain, "may be termed an organization or a field. . . . Its parts are not separate, independent, and self-acting entities. They are continually acting according to their own structure-function, reacting or straining under stress and interacting with other parts of the whole. Through these processes the parts of an organization maintain the whole, not as a sum but through integrated transactions. It is the whole which imposes the changing form of integration and organization on the parts. Thus the whole and all of its parts are necessary for the organization. No part may be insignificant or neglected, and change in and around any part will affect all parts as well as the whole. Thus the field may be said to be in a constant state of transactional, circular, corrective activity" (p. 32).

The authors wisely point out (p. 327) that to ascertain the etiology of any particular syndrome it becomes necessary to alter our habitual and somewhat old-fashioned search for "*the* cause" of the disease. Cause, they point out, may involve many processes concerned in a disturbance of function. Thus there may be: precipitating causes, constitutional aspects of cause, child-mother considerations, and transactions in current or recent life situations and so on. Even so, like others before them, the authors of this book flounder on the rocky problem of *causality* in psychosomatic illness. Nearly one quarter of the book, all told, is devoted to a discussion of the problem. In this matter of causality, it seems to be characteristic of human beings that we do not tolerate an admission of ignorance and the feeling of lack of control that attends it. In earlier times illness was ascribed to demons and black bile; the Pueblo Indian sought comfort in a rain dance rather than wait helplessly for the rains to come. So too, medical psychology, unwilling to wait for scientifically demonstrable causal explanations, has fostered the continued existence of the mind-body dichotomy. Psyche, with its synonyms such as mind, emotions, impulses, attitudes, and the like, has come to be treated as an entity when in fact it is not. So treated, it easily leads to a semantic trap in which psychic or emotional factors come to be called the *cause* of the disease. Although medical scientists would balk at the suggestion that, because administration of penicillin was followed by improvement of an attack of pneumonia, the *cause* of the pneumonia was an absence of penicillin in the body, the same kind of faulty logic is disturbingly frequent in psychological medicine. Thus if a patient's release of hostile feelings for a parent during treatment was followed by improvement in his symptoms, some have argued that his pent-up hostility *caused* the disease.

The authors of this book have not been notably more successful than their predecessors in avoiding this trap. Having abandoned the search for ultimate *cause*, the authors seek rather to understand *specificity* in psychosomatic disorders. In this guise the search for cause usually lends itself only to retrospective study, and the authors conclude: "specificity in psychosomatic syndromes must be in the psychosomatic organization that develops in transaction and as part of the first symbiotic relationship of mother and child" (p. 332). It would be satisfying to be able to report that the authors had succeeded, in the 79 case illustrations of this book, in giving adequate documentation of this provocative concept; to this reviewer the data they present do not seem convincing. Several of the case illustrations are well written; others leave much to be desired in the documentation of medical findings. The case illustrations flirt capriciously with causal concepts as, for example, in the case title: "Rampant tooth decay associated with unconscious hostility to the deceased mother" (Case 39, p. 182). Similarly, to speak of "Cardiac pain associated with

competitive feelings toward a significant supporting person" (Case 31, p. 145) is but to beg the question, while implying the causal relationship. Psychic causality of multiple sclerosis is similarly dealt with (p. 121): "Observations indicate that the multiple sclerosis has a characteristic premorbid personality with which specific stress or deprivation combines to precipitate a disease through as yet unknown mechanisms. The psychodynamic factors in this psychosomatic disintegration, the end result of which is characterized by demyelinization and patchy areas of axonal destruction, are in themselves engrafted into some unknown constitutional abnormalities." It is sobering to recall that, within the memory of some still living today, paresis and Parkinsonism were also considered to be functional, psychosomatic disorders.

Despite the theoretical revisions of Grinker and Robbins' *Psychosomatic Case Book*, the theory of psychosomatic medicine still has a very long way to go before it can be accommodated within the comprehensive body of theoretical medicine.

JOHN L. HAMPSON, M. D.,
The Johns Hopkins Hospital.

THE LOWENFELD MOSAIC TEST. By *Margaret Lowenfeld, M.R.C.S., L.R.C.P.* (London: Newman Neame, 1954. Price: 50*s*.)

The Mosaic Test has provided a stimulating challenge to the American psychologists who have reported favorably on its use as a projective technic since 1939. But lack of detailed description of the test and of mode of Mosaic design analysis has restricted its use. It is still new to many American psychologists, despite Dr. Lowenfeld's workshop at Catholic University in 1950 and the projects now being carried out at the Menninger Clinic and other centers.

This book describes basic principles of the test, and is intended to serve as textbook and manual for those unfamiliar with it. No statistical evaluations have been presented.

The Mosaic Test consists of 456 brightly colored plastic pieces, in the form of squares, half squares, diamonds, equilateral and scalene triangles, arranged in an open box. A subject is seated before a framed tray (12¾ x 10½ in.) lined with closely fitting paper, and is shown a piece of each shape. He is told that each of the 5 shapes appears in 6 colors—red, blue, yellow, black, green, and white; and he is asked to do something with the pieces in the box, on the tray, using as few or as many pieces of any shape and color, as he likes. The average time for completion of a design is 20 minutes.

The 144 colored plates accompanying the book illustrate designs described in the test, made by children of different ages, by mental defectives, by normal adults, by neurotics and by various types of psychotics. Differences in design found in various cultural patterns, particularly between European and American patterns, are described; and the possibilities of the test in industry and in anthropological studies are considered. It is the author's thesis that in addition to indicating characteristics of normal subjects which can be verified by study of actual behavior, the Mosaic designs can detect mental breakdown before any overt signs are manifested in behavior.

In contrast to many projective technics, the Mosaic Test is said to illustrate what an individual can actually do—his ability to organize patterns or *Gestalten* from movable elements in his visual motor perceptual field, and how he will respond to new situations.

From the material in the book it would seem that the Mosaic Test at the present time can be most helpful in evaluating various psychotic disorders. It holds great promise as a tool for the study of normal individuals.

The book is an organization and presentation of the structure of the Mosaic Test and its major findings to date. That, rather than its value as a manual for administration and evaluation of individual designs, seems its greatest value. As Dr. Lowenfeld has recognized, the difficulty of the necessary detailed observation of exact visual phenomena and the lack of verbal and statistical evaluation of the test will probably limit its use.

MARION MCKENZIE FONT,
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HYPNOTISM: AN OBJECTIVE STUDY IN SUGGESTIBILITY. By *André M. Weitzenhoffer*. (New York: Wiley, 1953. Price: $6.00. London: Chapman & Hall, Ltd., 1954. Price: 84*s*.)

The author, born in Paris, holds degrees in physics, mathematics, biology, and psychology from 3 American universities and has been interested in hypnotism for about 15 years. In this book he presents a collection of facts about hypnotism as viewed from empirical, applied, and theoretical standpoints. He also attempts to construct a new theory of suggestibility phenomena. The book is the result of the author's careful search through the literature. Chapters are followed by summaries and conclusions. The bibliography contains 508 items in addition to many older and classical studies mentioned in the text.

The treatise is in 4 parts. The first part contains material necessary for a clear understanding of the remainder of the text, including definitions and a description of tests of suggestibility. Part Two has to do with the major aspects of suggestibility with special emphasis on hypnosis and the universality of suggestibility. Suggestibility is affected by age (maximum at age 8), sex (greater in women and girls than in men and boys), and generally is increased according to intelligence. In the normal and abnormal personalities, it decreases in the order: psychoneurotics, normals, and psychotics (schizophrenics). The third part considers various phenomena that can be produced by hypnotic suggestion (Extrinsic Characteristics of Suggestibility and Hypnosis). Part Four contains the last 5 of the book's 22 chapters. After discussing past and present theories of suggestibility and hypnosis, the author points out that these theories assume hyp-

notic hypersuggestibility to be a unitary phenomenon, whereas he believes the observed phenomena have a multiple origin. Hypnosis is a state of altered awareness during which the subject behaves in a way consistent with his actual perceptions. Ideomotor action is considered the psychophysiological basis of suggestibility. The hypnotic alteration of awareness he considers to be "a combined selective inhibition and excitation of various cerebral regions leading to a dissociation of awareness from all stimuli except the voice of the hypnotist unless otherwise specified by suggestions." The physiological bases of hypersuggestibility are neuromotor enhancement (homoaction) and abstract conditioning (generalization or heteroaction). Thus through hypersuggestibility and dissociation of awareness the hypnotist's words become actual stimulus objects, his voice becoming in effect an extension of the subject's psychic processes. There may then follow a variety of perceptual changes. Judging by the material considered, the author finds that differences between hypnotic and waking phenomena are essentially quantitative and not qualitative.

In the preface the author mentions his intentional omission of considerable work reported in the field of therapy and his desire to remain within the experimental setting. He also states that this book is not directly concerned with applications of hypnosis to therapy nor is it intended to teach how to hypnotize. His aim is to furnish a useful source of information and to stimulate further research about suggestibility phenomena. His explicit yet tentative approach to conclusions stimulates the reader's interest. The reviewer considers this work an excellent textbook contribution to the subject.

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THE ORIGINS OF PSYCHOANALYSIS. Sigmund Freud's Letters to Wilhelm Fliess. Edited by *Marie Bonaparte, Anna Freud, Ernst Kris.* Translated by *Eric Mosbacher and James Strachey.* (New York: Basic Books, Inc., 1954. Price: $6.75.)

This volume consists of letters, notes, etc. sent by Freud to his intimate friend, Wilhelm Fliess, the Berlin nose and throat specialist, during the period 1887–1902 while he was working out his theory of psychoanalysis. As interested friend and confidential adviser, Fliess was kept informed of Freud's observations and speculations as he went along, and it is unfortunate that his letters to Freud giving his opinions in these discussions have not been recovered.

Of 284 items that came into their possession the editors selected 168 for publication, being guided by the principle "of making public everything relating to the worker's scientific work and scientific interests and everything bearing on the social and political conditions in which psychoanalysis originated."

The judgment that private letters constitute the most reliable and satisfactory form of autobiography is amply supported by this correspondence which illuminates the "prehistory and early history of psychoanalysis in a way that no other available material does, provides insight into certain phases of Freud's intellectual processes from his first clinical impressions until the formulation of his theory, throws light on the blind alleys and wrong roads into which he was diverted in the process of hypothesis-building, and furnishes a vivid picture of him during the difficult years during which his interest shifted from physiology and neurology to psychology and psychopathology."

In preparing his *The Life and Work of Sigmund Freud,* the first volume of which came out in 1953, Ernest Jones drew heavily upon these letters "which Marie Bonaparte daringly rescued from destruction." He also had access "to the important unpublished part of the correspondence." This volume of letters therefore companions very usefully Jones' *Life.*

When Freud learned that his letters to Fliess had not been destroyed as he had requested but had been sold to a Berlin book dealer, he made an unsuccessful attempt to purchase them. They were already in the hands of Marie Bonaparte. Freud never consented to their publication. After his death his daughter Anna gave permission.

One note, sounded repeatedly through the letters, is that of great pride and satisfaction Freud feels in the evolution of his theories. "One strenuous night last week, when I was in the stage of painful discomfort in which my brain works best, the barriers suddenly lifted, the veils dropped, and it was possible to see from the details of neurosis all the way to the very conditioning of consciousness. Everything fell into place, the cogs meshed, the thing really seemed to be a machine which in a moment would run of itself." And sometimes one wonders if Freud was entirely immune to the hazard of all zealous investigators, that of making the case fit the theory. "I have a case of dipsomania I want to tell you about at our next meeting; it resolved itself very obviously in accordance with my theories." And in another letter: "Another presentiment tells me, as if I knew already—although I do not know anything at all—that I am about to discover the source of morality."

Jones' faithful recording of Freud's own psychic perturbations during his inventive years reflects the contents of the letters themselves. In his uninhibited communications to Fliess Freud discusses his mental states freely. He speaks of his "left-sided migraine" and accompanying moods. "My depression left me, not after one migraine, but after a whole series of such states." He mentions his "railway phobia;" he says to Fliess, "My anxiety over travel you have seen yourself in full bloom."

His excessive smoking caused him concern about his heart and he broke off the habit, resuming it after 14 months' abstinence, "because I must treat that mind of mine decently or the fellow will not work for me." Several months later: "I have entirely given up smoking again, so as to be rid of the horrid struggle with the craving for a fourth or fifth cigar." But within a month he was smoking

again—"the increase in psychical hyperaesthesia was insupportable." He describes vividly the symptoms that came on a few days after his first break with Lady Nicotine—"sudden cardiac oppression . . . violent arrhythmia with constant tension, pressure, and burning in the region of the heart, burning pains down the left arm, some dyspnoea . . . depression of spirits which expressed itself in visions of death and departure in place of the normal frenzy of activity. . . . It is painful for a medical man . . . not to know whether he himself is suffering from a reasonable or a hypochondriacal depression."

Of special interest is the discussion in Freud's letters of his self-analysis which went on for two years or more and was not an altogether painless process. "After a spell of good spirits," he writes, "here I am now having a fit of gloom. The chief patient I am busy with is myself. My little hysteria, which was much intensified by work, has yielded one stage further. The rest still sticks. That is the first reason for my mood. This analysis is harder than any other." Freud frequently refers to his loneliness, his isolation, his overmastering need for his friend, his "only audience." (But from this bosom friend he was later estranged because, for one thing, they could not agree on the bisexual theory.) Freud reported fully his symptoms both physical and mental and took careful note of reciprocal psychic and somatic influences. "Under the influence of the analysis my heart trouble is now often replaced by stomach trouble." A year and a half later he writes regarding his progress in self-analysis, "All this work has done a lot of good to my own mental life. I am obviously much more normal than I was four or five years ago." Earlier in his analysis he had made the striking statement: "Self-analysis is really impossible, otherwise there would be no illness."

Stefan Zweig and Sigmund Freud were both Jews; they were friends; both were in exile; it was Zweig who spoke the parting words at Freud's funeral; for both Vienna had been home—old Vienna, *die Kaiserstadt*—and old Vienna was peculiarly the home-place of the Jews. She was the mothering city that nourished their genius and it was they who became preeminent in the cultural life of the community. *Alt Wien,* that Zweig loved and glorified and lamented so poignantly in his autobiographical *The World of Yesterday.* But the attitude of Freud, how different! In a letter to Fliess written in March 1900 he exclaimed, "I hate Vienna with a positively personal hatred." Both men lived in Vienna, but it was Zweig who belonged.

The letters selected for this volume, although not the complete correspondence, are a truly remarkable set of documents and reveal as no other form of biography could the manner of man Freud was. Those who may not have access to the book or who might be served by a somewhat more condensed form of the material will find in *Harper's Magazine* for April and May 1954 a generous and representative sampling (47 letters) that appeared in advance of the publication of the letters in book form.

C. B. F.

PSYCHOMOTOR ASPECTS OF MENTAL DISEASE. By *H. E. King.* (Cambridge: Harvard University Press, 1954.)

In his work with the Columbia-Greystone project, Dr. King tried to determine the psychologic effects of extirpation of cortical tissue from frontal lobes. While other aspects of the extensive test battery did not give significant results, tests of psychomotor functioning revealed faulty and retarded performance in these patients even before psychosurgery. Further psychomotor impairment occurred regularly in the immediate postoperative period, with temporary increase in psychiatric symptoms. The experiments discussed in this book are a more systematic, exact attempt to examine the possible relationship between psychiatric disturbance and psychomotor performance.

Psychomotor defects in psychotics have been noted since Kraepelin's time, but no significant work had been done in this area until Saunders and Isaacs (1929), and Shakow, Huston *et al.* (1932-), made their contributions. Dr. King's battery included a test of reaction time as a measure of the speed of initiating movement, a tapping test to measure speed in stereotyped wrist-arm movement, and a measure of precision and speed in finger and manual dexterity.

This study indicates that chronic schizophrenics are distinctly retarded in comparison to normals on all the tests of fine psychomotor performance. "Gradations of patients within the chronic schizophrenic group, in terms of the degree of expression of behavior disorder, whether made on the basis of psychiatric or psychologic behavior rating scales, hospital management criteria, duration of illness, or psychopathologic type, were accompanied by a shading off of performance scores on all psychomotor tasks, indicating a close correspondence between performance on the test battery and clinical status." Pseudoneurotic schizophrenics showed psychomotor defect similar to that of the chronic schizophrenics, but in less severe form, while the psychoneurotics more closely resembled normal subjects. Thus the greater the deviation from the normal in psychologic adjustment, the more severe the retardation noted in tests of psychomotor function.

Previous authors attribute the defect to faulty motivational patterns. Dr. King, on the other hand, suggests that the power of movement serves as the basic method by which all animals adapt to the environment. The more highly evolved animal forms have greater subtlety of possible movement and response adaptiveness. This may be further refined and sometimes overshadowed by conscious cerebration, but the capacity for motor responsiveness continues to play the primary role in human adaptation. In the behavior disorders the psychomotor capacity is profoundly disturbed. This, says Dr. King, is a defect at the core of psychologic processes rather than at the periphery, such as inconsistency of motivation might be. The retarded psychomotor response is a basic indication of a state of psychobiologic maladaptation in psychiatric patients.

This book should be interesting reading for the worker in psychopathology who would like to gain an understanding of how experimental psychologic research techniques may be profitably used in this area. The text is succinctly written with clear, well-defined concepts. It contains a good review of the pertinent literature and a provocative theoretical chapter, which, with the experimental results, should act as a stimulant for further useful research.

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PRINCIPLES AND TECHNIQUES OF PSYCHIATRIC NURSING. Fourth Edition. By *Madelene Elliott Ingram*. (Philadelphia and London: Saunders, 1955. Price: $4.75.)

The fourth edition of this book adds a unit on Therapeutic Techniques for Relating the Patient to the Culture. Occupational therapy is defined to include bibliotherapy, drama therapy, music, education, and physical activities. This obviously suggests the inclusion of many new specialists in the therapy program; at the same time emphasis is placed on the role of the nurse not only as coordinator of the patient's activities but also as occupational therapist on the ward in the many unoccupied hours which occur in all but the exceptionally staffed hospital. Her function as participating assistant in the formal program is also emphasized. A rather challenging education would seem to be ahead for the nursing staff itself, and for others! Perhaps, too, in the student nurse's brief affiliation more time should be given to the general principles and values of occupational therapy and less to teaching a sketchy knowledge of a few handicrafts.

Chapter 2, "Approach," is a good introduction for students. The discussions of such problems as personal hygiene, the care of personal property, etc., while thorough as to the necessary details, are valuable in showing the relation of these matters to the patient's mental condition and morale.

Chapter 22 contains much excellent material on charting. One regrets however the suggestion that "in order to preserve some continuity of thought and neatness in appearance, charting should be done by one nurse." Neatness is certainly desirable; probably a reasonable degree of it can be insisted on, even though handwritings differ. But surely continuity of thought and accuracy will be best achieved if the person who makes the observation records it. This book is written primarily for student nurses, and it is pointed out that students still need "the how-to's" as well as the "why's." The practice field is the place where, in the main, they should acquire the "how-to's." Critical observation and its recording, it will probably be agreed, is one of the most important techniques of nursing, and students should practice it.

The book is well illustrated. A most interesting feature is the student reports on the handling of various nursing problems which appear at the end of most of the chapters.

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LA THERAPEUTIQUE OCCUPATIONNELLE EN PSYCHIATRIE. (OCCUPATIONAL THERAPY IN PSYCHIATRY). By *Barahone Fernandes with the collaboration of Seabra Dinis*. (Paris: Hermann & Cie., 1954.)

Two Lisbon psychiatrists have given us a brief but well-rounded and ample work on occupational therapy in mental disease. One hundred ninety authorities are quoted (including many American ones), yet the authors' observations, interpretations, and practical suggestions are based on their own experience.

They believe that work for the mentally ill helps the other therapeutic measures, revives an interest in the patients and in their destiny, creates in the hospital a new spirit of productive activity, raises its general level, ameliorates the material and moral conditions of the patients and offers a basis for their education and then social integration. It "humanizes" the help afforded them and diminishes the distance that separates the mentally ill from the normal. It offers also the opportunity to understand better the causes of mental disturbances by analyzing the change of symptoms during the course of occupational activities. Like the shock therapies, psychosurgery, psychoanalysis, "biological" psychiatry, and the abreaction procedures, occupational therapy offers the opportunity to study the malleability of certain symptoms while under therapeutic attack.

The authors give a brief historical survey of occupations in the treatment of the mentally affected, to which we may add the Talmudic dictum: "Idleness causes melancholy" (Ketubot 59b) and consider H. Simon's volume: *Aktivere Krankenbehandlung in der Irrenanstalt," 1929*, the classic work on ergotherapy.

They suggest that all the activities of the hospital: sewing, laundering, cooking, gardening, etc. should be open to patients even if it is contrary to the wishes of the administration. The attendants must not be any mere guards, but retained to render medical aid in emergencies and to assist in the various shock and fever therapies.

Mental hospitals should cease to be prisons or asylums. Window-bars, padded cells, blocked-up courtyards should be abolished. The patients must spend the entire day at work, recreation, and assemblies. Among occupational works suggested are numerous ones for the gravely ill: Making of lint, rolling spools of thread; for the rigid or agitated: housework, such as sweeping, cleaning, scrubbing, bed-making, carrying objects, dish-washing, etc.; for the calm and orderly: raffia weaving. Women will prefer sewing, knitting, crocheting. Folding linen and ironing evokes even in the unruly a sense of responsibility and distraction. Catatonics, epileptics, retarded and confused may be employed in parks and gardens. Of course, patients may be assigned as assistants in various offices of the hospital, in the library or to the carpenter, locksmith, shoemaker, printer, etc. Their rule: Anything that can be made or done by the patients should not be done by normal individuals.

An annual exhibit of work done by patients has

a salutary effect on the community and an encouraging influence on the patients.

Each type of work should fit the condition of the patient and should be prescribed for him like a medicine. Patients must be given work immediately on their admission. Those confused or otherwise incapacitated should be assisted by an attendant, for the contact with a sane person has already a therapeutic effect. The patient's indifference or resistence must not discourage new attempts.

The authors give detailed instruction on occupational talk in the various mental conditions and in connection with somatic treatments (shock, psychosurgery) the aims of rehabilitation. In the chapter explaining how work affects the mental condition, various theories are suggested. It acts as a cerebral tonic (Schüle), metabolic activator (Jahn), improves cerebral circulation (Meynert), the disappearance, through distraction, of morbid images and memories (Wagner), fights the feeling of isolation (Bovet), revives the daily rhythm of normal activity (Beringer), energy discharge (Kraines), escape from false complexes (psychoanalysts), etc.

This is a useful manual for the libraries of mental hospitals.

Hirsch L. Gordon, M. D.,
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The British Encyclopaedia of Medical Practice. Medical Progress, 1954. Edited by *The Lord Horder.* (London: Butterworth, 1954.)

The present volume follows previous reviews of Medical Progress. There are surveys of different fields of medicine and surgery, 11 in all, a small section on recent developments in pharmacology and therapeutics, and a final part consisting of abstracts of selected papers of the year in all subjects.

As Lord Horder says in his introduction, one notes that many authors in the different surveys frequently choose the same subjects to discuss. Thus in medicine, surgery, chest surgery, and in gastroenterology, for instance, cardiovascular disease, tuberculosis, peptic ulcer, oesophageal disease and ulcerative colitis have much common ground. The specialties may overlap so much that there is more integration than might be feared in this age of specialization. The improvement in the treatment of most forms of tuberculosis by chemotherapy has obviously brought physicians and surgeons much closer together, not only making pneumothorax out of date, but modifying the need for surgical treatment as well as increasing its safety.

The treatment of hyperthyroidism with radioactive iodine still lacks general agreement as to dosage. Ideas on the treatment of hypertension are still evolving, and the physicians and surgeons discuss this.

In obstetrics and gynaecology, the toxaemias of pregnancy and menopausal bleeding are still the subject of much work and controversy.

Under neurology, new treatment in epilepsy and the important subject of facial pain make an interesting review.

In psychological medicine, Dr. Noel Harris tells of the present thinking on the physiological abnormalities which may be investigated by newer methods in pathological psychological states, from childhood to old age. Closely allied to the old-age problem is that of the chronically ill, and, in a full survey of physical medicine, the modern trends and the description of ingenious devices and methods are reviewed and illustrated.

As medicine progresses there will be more chronically ill, and aging chronically ill, so that more thought will be forced upon us in this regard. Occupational skin disease and forensic medicine make up a more original and useful surveys.

These volumes of Medical Progress cannot fail to be of value, and certainly of interest, to everyone.

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Group Psychotherapy. Studies in Methodology of Research and Therapy. By *Florence B. Powdermaker, Ph. D., M. D. and Jerome D. Frank, Ph. D., M. D.* (Cambridge: Harvard University Press, 1953. Price: $6.50.)

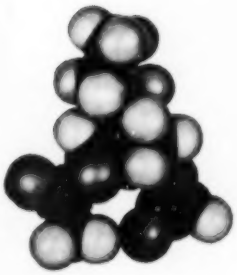
At a time when group psychotherapy is expanding rapidly, training facilities are scarce. Many therapists trained in individual psychotherapy experiment with group psychotherapy. They are groping, often perplexed and bewildered, eager to seek guidance and advice. This is the situation in which books like this are of incalculable value.

The authors, assisted by a large staff of collaborating psychiatrists and research personnel, present a detailed report of their extensive experience with group psychotherapy, carried out at the V.A. Mental Hygiene Clinic in Washington from July 1947 to December 1948 and at the V.A. Hospital at Perry Point from July 1947 to May 1949. The first project dealt primarily with groups of neurotic patients, the second with chronic schizophrenics. A successful integration of the personnel consisting of therapists, supervisors, and observers has been achieved. It permitted methods of recording and of analyzing the process of therapy, uncommon to the experiences of most group psychotherapists.

While only one type of therapy has been used, namely the psychoanalyticly oriented, the observations of the actual procedures provide valuable information to any therapist, regardless of his theoretical orientation. The detailed discussions of a wide variety of disturbances and of problems which every group psychotherapist encounters permit study, orientation, and growth to every newcomer in the field of group psychotherapy.

Rudolf Dreikurs, M. D.,
Chicago Medical School.
Roosevelt University.

Two articles in the April 30th issue of
The Journal of the AMA [1,2] *report on . . .*



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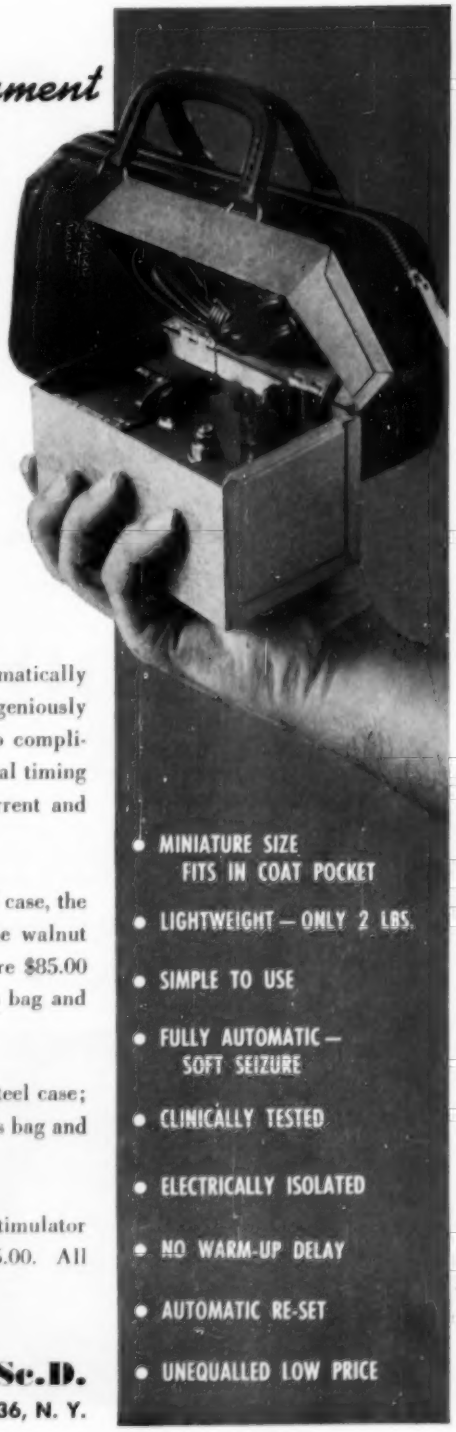

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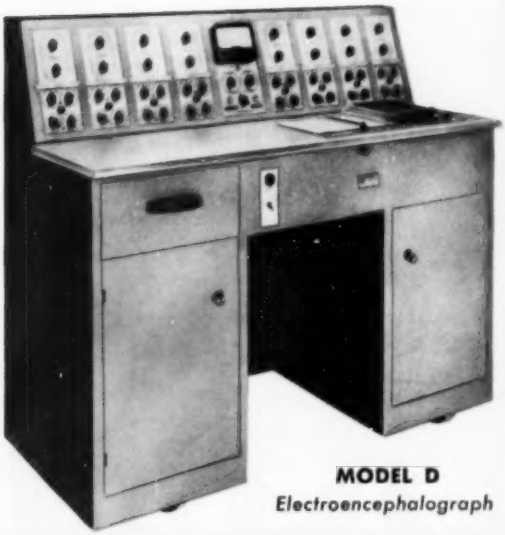

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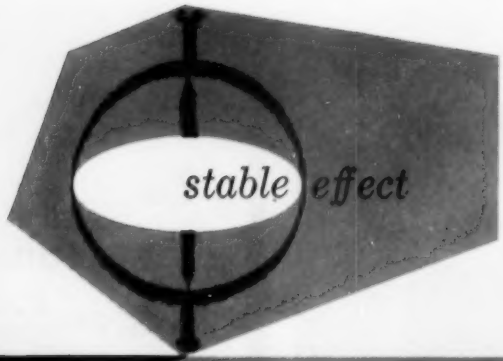

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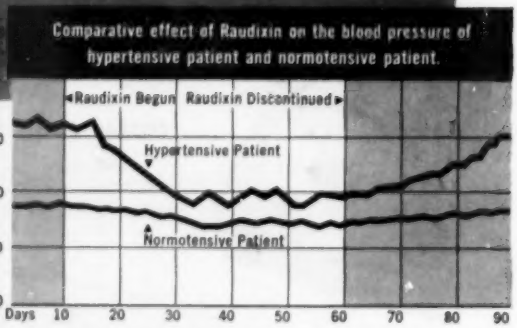

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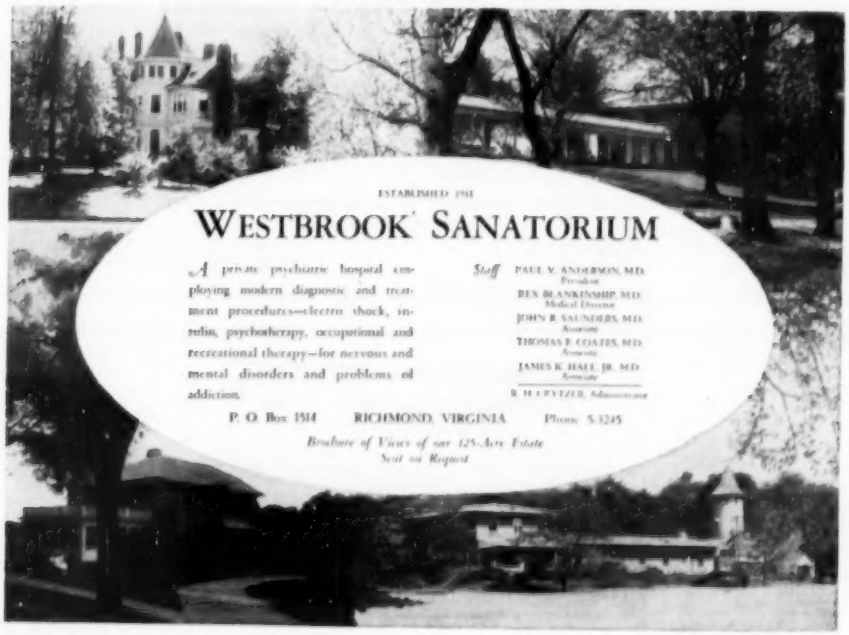

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A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

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THE ULTIMATE GOAL IS ADJUSTMENT OF THE "WHOLE CHILD"

The psychologic value of all aspects of treatment, training and education is carefully considered for each child at The Woods Schools. The ultimate goal is adjustment of the "whole child," physical, intellectual and social. Each child is taught to handle practical situations, acquire good work habits, accept responsibility, meet social situations, enjoy social experiences, and to function at the maximum of his or her ability as an individual and as a member of the group.

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William L. Noe, Jr., M. D., Director of Medical Services
Eugene B. Spitz, M. D., Neuro-Surgery Consultant

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Kathryn Burchard, M. A.
Gisela Ungurian, M. A.
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Edward L. Johnstone,
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THE WOODS SCHOOLS

A non-profit organization, founded in 1913

LANGHORNE, PENNSYLVANIA

d is for distance

D is for Devereux Schools

where the distance between the "real world" and the therapeutic interview is exactly 1.7 inches.

This, in turn, is the thickness of a closed door which separates the therapist's office from the therapeutic school or community environment outside it. In the latter, formal therapy is implemented by carefully structured opportunities for "living out" insight and acceptance through reality experiences, under psychotherapeutic direction.

We should like to tell you more about Devereux—for Devereux's separated "units" and centralized professional services offer all of the small school's advantages, plus maximum treatment facilities, at a reasonable rate.

We therefore invite you to visit us; or if that is not practicable, to address an inquiry to:

JOHN M. BARCLAY
Director of Development
The Devereux Foundation
Devon, Pennsylvania

THE DEVEREUX FOUNDATION

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Helena T. Devereux, Director

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